ANNOUNCEMENTS

THE UNIVERSITY OF CHICAGO

THE MEDICAL SCHOOLS

FOR THE FIFTIETH ANNIVERSARY
SESSIONS OF 1940 · 1941

1891 1941

1891 1941

THE UNIVERSITY OF CHICAGO

FIFTIETH ANNIVERSARY

ANNOUNCEMENT

REJOICING IN YOUTH AND FREEDOM, GRATEFUL TO ITS BENEFACTORS, AND IN THE SPIRIT OF REDEDICATION TO THE SEARCH FOR TRUTH AND THE ENRICHMENT OF LIFE, THE UNIVERSITY OF CHICAGO WILL CELEBRATE IN 1941 THE FIFTIETH ANNIVERSARY OF ITS FOUNDATION.

THE FOUNDER OF THE UNIVERSITY OF CHICAGO WAS A PIONEER OF AMERICAN INDUSTRY AND PHILANTHROPY. THE FIRST PRESIDENT WAS A PIONEER OF THE HIGHER EDUCATION IN AMERICA. THE SPIRIT WHICH ANIMATED THEM STILL PERVADES THE QUADRANGLES. IT IS FITTING, THEREFORE, THAT THE THEME OF THE CELEBRATION SHOULD BE *NEW FRONTIERS IN EDUCATION AND RESEARCH.*

THIS THEME WILL BE EMPHASIZED IN EXHIBITIONS DURING THE ANNIVERSARY YEAR 1940–41, IN CONFERENCES OF SCHOLARS AND SCIENTISTS TO BE HELD IN SEPTEMBER, 1941, AND IN A SPECIAL SESSION OF THE ALUMNI SCHOOL. THE CELEBRATION WILL CULMINATE IN AN ACADEMIC FESTIVAL EXTENDING FROM SEPTEMBER 26 TO SEPTEMBER 29, 1941, THE PROGRAM OF WHICH WILL INCLUDE, AMONG OTHER EVENTS, AN ALUMNI REUNION AND ASSEMBLY, A FESTIVAL CONCERT, A SERVICE OF THANKSGIVING AND COMMEMORATION, AND A CONVOCATION WITH THE AWARD OF HONORARY DEGREES.

IT IS HOPED THAT THE ACADEMIC FESTIVAL WILL BE FAVORED WITH THE PRESENCE NOT ONLY OF THOSE WHO ARE BOUND TO THE UNIVERSITY BY TIES OF PERSONAL INTEREST AND SENTIMENT BUT OF THE OFFICIAL REPRESENTATIVES OF UNIVERSITIES, COLLEGES, LEARNED SOCIETIES, AND OTHER INSTITUTIONS OF EDUCATION AND CULTURE. INVITATIONS WILL BE ISSUED IN DUE SEASON AND A CORDIAL WELCOME IS ASSURED TO ALL WHO HONOR THE UNIVERSITY WITH THEIR COMPANY.

Robert Maynard Hutchins
President

Frederic Woodward
Director of the Celebration

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CALENDAR FOR THE YEAR 1940-41

1940

June 8	Saturday	Alumni Day
June 9	Sunday	Convocation Sunday
June 10	Monday	College Day
June 11	Tuesday	Summer Convocation
June 12	Wednesday	Spring Quarter ends

SUMMER QUARTER

June 17	Monday	Registration for the Summer Quarter
June 18	Tuesday	
June 19	*Wednesday*	*Summer Quarter begins—classes meet**
June 22	Saturday	All classes meet on the first Saturday of the Summer Quarter
July 4	Thursday	Independence Day: a holiday
July 17	Wednesday	Registration for the Second Term of the Summer Quarter
July 18	Thursday	
July 19	Friday	
July 19	Friday	First Term of the Summer Quarter ends
July 22	Monday	Second Term of the Summer Quarter begins
Aug. 18	Sunday	Convocation Sunday
Aug. 19–24		Entrance Examinations
Aug. 23	Friday	Autumn Convocation—Summer Quarter ends
Aug. 24–Sept. 26		Quarterly Recess

AUTUMN QUARTER

Sept. 23–28		Freshman Week
Sept. 27	Friday	Registration for the Autumn Quarter
Sept. 28	Saturday	
Sept. 30	*Monday*	*Autumn Quarter begins—classes meet**
Nov. 21	Thursday	Thanksgiving Day: a holiday
Dec. 2–7		Entrance Examinations
Dec. 15	Sunday	Convocation Sunday
Dec. 17	Tuesday	Winter Convocation
Dec. 18	Wednesday	Autumn Quarter ends
Dec. 19–Jan. 1		Quarterly Recess

1941

WINTER QUARTER

Jan. 2	*Thursday*	*Winter Quarter begins—registration—classes meet**
Feb. 12	Wednesday	Lincoln's Birthday: a holiday
Feb. 22	Saturday	Washington's Birthday: a holiday
Mar. 3–8		Entrance Examinations
Mar. 9	Sunday	Convocation Sunday
Mar. 14	Friday	Spring Convocation—Winter Quarter ends
Mar. 15–23		Quarterly Recess

SPRING QUARTER

Mar. 24	*Monday*	*Spring Quarter begins—registration—classes meet**
May 30	Friday	Memorial Day: a holiday
June 7	Saturday	Alumni Day
June 8	Sunday	Convocation Sunday
June 9	Monday	College Day
June 10	Tuesday	Summer Convocation
June 11	Wednesday	Spring Quarter ends

* Classes scheduled to meet on the opening day of the Quarter will meet on that day; others will meet according to their regular schedule.

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HISTORICAL SKETCH

In 1941 The University of Chicago will celebrate the fiftieth anniversary of its foundation.

The present University was preceded by an earlier institution, now known as the Old University, which was incorporated in 1857 and was located on a site donated by Senator Stephen A. Douglas on Cottage Grove Avenue between Thirty-third and Thirty-fifth streets. Small in size and collegiate in character it fulfilled its function until 1886, when it was forced by financial difficulties to close its doors. It had granted a total of 312 degrees, and its alumni were subsequently "adopted" by the new University.

In 1889 the American Baptist Education Society resolved to aid in the establishment of a new collegiate institution in Chicago, and John D. Rockefeller subscribed $600,000 on condition that $400,000 additional should be pledged within a year. Under the leadership of Thomas W. Goodspeed and Frederick T. Gates, Secretary of the Education Society, the necessary pledges were obtained. Marshall Field presented a tract of land as a site, and on September 10, 1890, The University of Chicago was incorporated. The first Board of Trustees consisted of twenty-one members, with E. Nelson Blake as President of the Board. Mr. Blake was soon succeeded by Martin A. Ryerson, who served with distinction until 1922, when Harold H. Swift, an alumnus of the University, was chosen to the presidency (now chairmanship) of the Board.

At the first meeting of the Board of Trustees after incorporation William Rainey Harper was appointed President of the University. He was then thirty-four years of age. He had been graduated from Muskingum College at fourteen and had received his Ph.D. from Yale at eighteen. He had taught at the Baptist Theological Seminary at Morgan Park, and at the time of his appointment to the presidency he was Professor of Hebrew in Yale University.

Dr. Harper insisted that the new institution should be envisaged as a real university, with a faculty and facilities adequate not only for undergraduate teaching but for the pursuit of advanced studies and research. Mr. Rockefeller, convinced of the soundness of this view, added $1,000,000 to his initial gift, and in December, 1890, a broad outline of Dr. Harper's plans was presented to the Board of Trustees and adopted.

The first President assumed his duties at the University on July 1, 1891, which, because of the significance of that event, has been celebrated as the date of the founding of the University. A year was devoted to the selection of the faculty, the development of educational and architectural plans, and the completion of the first building—Cobb Lecture Hall. Attracted by Dr. Harper's conception of a university and by salaries that were then considered astonishing, a remarkable faculty was assembled. It included eight former presidents of universities or colleges and a number of the leading scholars and scientists of the country. When, on October 1, 1892, the doors of Cobb Lecture Hall were opened to students, the faculty numbered 120 and the students 594.

Fortunately, the University had from the beginning a well-conceived architectural plan. The first buildings were constructed of Indiana limestone in a late Gothic style, and, although the Quadrangles now represent the work of various architects, the harmony of material and style has been faithfully preserved. Within the first five years thirteen buildings were erected. During the next ten years eighteen were added. Today, on the campus of 105 acres extending along both sides of the Midway, there are eighty-five buildings.

From the day of its foundation the University was in many important respects a pioneering institution. It was the first major university which from the beginning accepted women as students on an equal basis with men. In 1892 it established a university press for the publication of the work of scholars and scientists. By the organization of the curriculum on a quarter instead of a semester basis the first opportunity was afforded to pursue regular university studies during the summer months. Through an extension division the first home-study program on a university plane was established. By dividing the undergraduate curriculum into a junior and a senior college the University pioneered in a movement which has resulted in the establishment of nearly six hundred junior colleges in the United States. More important, perhaps, than any of these innovations was the recognition and performance from the outset of a university's function in the fields of graduate study and scientific research.

President Harper, after a service of fifteen years, died in 1906. He was succeeded by Harry Pratt Judson, who had been closely associated with him as Dean of the Faculties. In 1923 Dr. Judson retired and was succeeded by Ernest DeWitt Burton, Head of the Department of New Testament and Early Christian Literature. After only two years of service President Burton died, and Max Mason, Professor of Mathematical Physics in the University of Wisconsin, was appointed the fourth presi-

dent of the University. In 1928 he resigned to accept a position with the Rockefeller Foundation, of which he soon thereafter became the president.

Each of these presidents contributed his talents effectively to the strengthening of the University. There were periods of rapid growth and periods of adjustment and consolidation. In each administration, in one direction or another, there was marked development.

Robert Maynard Hutchins, Dean of the Law School of Yale University, became the fifth president of the University on July 1, 1929. On his recommendation the various departments in arts, literature, and science were grouped in four Divisions—the Humanities, the Physical Sciences, the Biological Sciences, and the Social Sciences. The curriculum of the College (originally of the Junior College) was so reorganized by the faculty as to provide a general education for all students and prepare them for admission to a Division or a Professional School. Since this reorganization all degrees have been conferred by the Divisions and Schools, and the progress of the student from the College to a Division or School and thence to his degree has been chiefly determined not by the accumulation of course credits but by comprehensive examinations.

In addition to the College and four Divisions, the University includes University College (downtown) and seven professional schools—the Divinity School, the Law School, the School of Business, the School of Social Service Administration, the Graduate Library School, the Medical School, and the Rush Graduate School of Medicine. The former School of Education has been incorporated in the Division of the Social Sciences.

The Divinity School is a continuation of the Baptist Theological Union Seminary, which was founded in 1866 and merged with the University in 1891. The School of Business was established in 1898, and the Law School in 1902. The School of Social Service Administration originated in the Chicago School of Civics and Philanthropy, which was taken over by the University in 1920. The Graduate Library School was established in 1926.

Rush Medical College, chartered in 1837, was affiliated in 1898 and became an integral part of the University in 1924. The Medical School of the Division of the Biological Sciences was established in 1927, and in 1939 it was determined that Rush should become a post-graduate medical school.

The University's Oriental Institute, devoted to archeological research chiefly in the Near East, was founded in 1919. The Yerkes Astronomical Observatory was established in Williams Bay, Wisconsin, in 1897, and by

a co-operative arrangement with the University of Texas the Yerkes staff now operates also the new McDonald Observatory in Texas.

The Articles of Incorporation of the University originally provided that two-thirds of the members of the Board of Trustees, and also the President of the University, should be members of Baptist churches. It was not contemplated, however, that the institution should be sectarian in character. As the University developed, the number of Trustees was increased and the restriction as to denominational membership was modified. The Articles of Incorporation no longer require that the President shall be a Baptist and now provide that, of a Board of thirty-five members, three-fifths shall be members of Christian churches, and of the three-fifths a majority shall be Baptists.

As of June 30, 1939, contributions to the University since its foundation aggregated $137,407,000. Of this sum the Founder contributed $34,708,000. Endowment funds amounted to $70,944,000, and the physical plant was valued at $44,421,000. In October, 1939, the faculty numbered 864, and the registration of students on the Quadrangles was 5,702, of which number 2,797 were undergraduates, 1,562 graduate students in the Divisions, and 1,343 students in the Professional Schools. The University had granted degrees to 38,960 persons as of June 30, 1939.*

* For detailed information, especially of the earlier years of the University, the reader is referred to Thomas W. Goodspeed's *A History of the University of Chicago*, published by the University of Chicago Press in 1916, and to the same author's *The Story of the University of Chicago*, published by the Press in 1925.

OFFICERS OF ADMINISTRATION

Robert Maynard Hutchins, President of the University, Harper Memorial Library, Room W11.

Emery T. Filbey, Vice-President of the University, Harper Memorial Library, Room W11.

William Benton, Vice-President of the University, Harper Memorial Library, Room W 11.

Frederic Woodward, Vice-President Emeritus of the University; Director of the Fiftieth Anniversary Celebration; Goodspeed Hall, Room 207.

Martin Joseph Freeman, Entrance Counselor, Cobb Lecture Hall, Room 105.

Charles Whitney Gilkey, Dean of the Chapel; Associate Dean of the Divinity School; Chapel Office, Rockefeller Memorial Chapel.

Carl Frederick Huth, Dean of University College, Cobb Lecture Hall, Room 202; Director of the Home-Study Department, Director of the Summer Quarter, Ellis Hall.

William John Mather, Bursar, Press Building, Room 100.

Ernest C. Miller, Registrar, Cobb Lecture Hall, Room 104.

William Madison Randall, Assistant Dean of Students, Cobb Lecture Hall, Room 203.

McKendree Llewellyn Raney, Director of the University Libraries, Harper Memorial Library, Room M27.

Ralph Winfred Tyler, Chief Examiner, Board of Examinations, 1375 East Sixtieth Street.

Valerie C. Wickhem, Director of Admissions, Cobb Lecture Hall, Room 105.

Robert Carlton Woellner, Executive Secretary, Board of Vocational Guidance and Placement, Cobb Lecture Hall, Room 215.

George Alan Works, Dean of Students and University Examiner, Cobb Lecture Hall, Room 203.

William Hay Taliaferro, Dean of the Division of the Biological Sciences, Albert Merritt Billings Hospital, Room S144.

Wilber E. Post, Dean of Rush Graduate School of Medicine.

Arthur Charles Bachmeyer, Associate Dean of the Division of the Biological Sciences; Director of the University Clinics; Albert Merritt Billings Hospital, Room S144.

Basil Coleman Hyatt Harvey, Dean of Students in the Division of the Biological Sciences, including medical students, Cobb Lecture Hall, Room 216.

Victor E. Johnson, Dean of Students in the Division of the Biological Sciences (beginning October 1), Cobb Lecture Hall, Room 216.

Nellie Gorgas, Assistant to the Dean of the Division of the Biological Sciences and to the Director of the University Clinics.

Earle Gray, Acting Dean of Rush Medical College.

Stanley A. Ferguson, Assistant to the Director of the University Clinics.

GENERAL STATEMENT

INTRODUCTION

The Medical Schools of the University include (1) the School of Medicine organized in the Division of Biological Sciences and (2) Rush Medical College. The Rush Graduate School of Medicine is being organized. Until June 1, 1942, undergraduate medical work will be continued at Rush to allow students now enrolled to complete their work. After that time, however, only graduate courses will be offered.

The School of Medicine was established in the Division of the Biological Sciences in 1924, when clinical facilities were provided in close contact with the preclinical departments which were already on the University Quadrangles. Each of the clinical and preclinical departments is organized as an individual University department on the same basis as all the other departments of the University, that is, for the preservation and advancement of knowledge in its particular field and for the teaching of students. Each preclinical department includes in its work, in addition to the courses leading to the degree of Doctor of Medicine, courses leading to the degrees of Bachelor of Science, Master of Science, and Doctor of Philosophy. The clinical departments also offer courses leading to the Departmental degree of Master of Science and the degree of Doctor of Philosophy.

Clinical training is provided in the University Clinics and associated hospitals and dispensaries for students on the Quadrangles, and in the Presbyterian Hospital, the Central Free Dispensary, and associated hospitals on the West Side of Chicago for students at Rush Medical College.

Five University departments are devoted to the fundamental preclinical medical sciences, four devoted to clinical medical sciences on the Quadrangles, seven to the clinical medical sciences in Rush Medical College. The Department of Pathology works in both clinical and preclinical fields. All these co-operate in the work of the medical courses. Through these courses the University seeks to develop graduates capable of sound scientific practice who will grow as the sciences grow and so take to their patients all that science can offer in their aid.

Active research is carried on in all departments on current medical problems and in the fundamental sciences. Capable students are encouraged to share in this work and to undertake independent investigations. At least a minimum training in research is regarded as an important element in medical education.

The medical course extends through four years (twelve quarters) and leads to the degree of Doctor of Medicine. A fifth year devoted to a hospital internship is required in Illinois for license to practice medicine.

HISTORY OF RUSH MEDICAL COLLEGE

Rush Medical College was chartered by a special act of the legislature of the state of Illinois in 1837. It was founded by Daniel Brainerd, its first President. The first course of lectures was delivered in the second story of a frame building on Clark Street, near Randolph, in 1843. In 1844 a college building was erected at the corner of Dearborn Avenue and Indiana Street (now Grand Avenue). In 1867 a larger building was erected on the site of the old one. This edifice was destroyed in the great fire of 1871 and for

three years the College occupied a temporary amphitheater on the ground of the Cook County Hospital, then located at Arnold and Eighteenth streets. In 1875 a Clinical Building was erected at the corner of Wood and Harrison streets, and in 1893 a Laboratory Building was erected on the south side of Harrison Street, opposite the Clinical Building. The Senn Building, adjoining the Clinical Building on the east, was erected in 1903. In 1887 the College became the medical department of Lake Forest University, retaining, however, its autonomy. This relation was dissolved by mutual consent in April, 1898, and in the same month affiliation with the University of Chicago was established. In 1883 the Presbyterian Hospital, adjoining the College, was established in affiliation with Rush Medical College. In May, 1924, a new contract was executed between the corporation of Rush Medical College and the University of Chicago in accordance with which the affiliation of 1898 was superseded and the University took over the work of Rush Medical College as a department of the University. This contract went into effect June 16, 1924. The old Clinical Building was removed in 1924, and has been replaced by the Rawson Clinical Laboratory and the Norman Bridge Laboratories of Pathology. The Rush Graduate School of Medicine is being organized under Dean Wilber E. Post and will replace Rush Medical College. Undergraduate medical studies will not be continued after June 1, 1942.

GENERAL REGULATIONS OF THE MEDICAL SCHOOLS

1. *Changes in rules and regulations.*—The right is reserved by the University to make changes at any time in requirements for admission, curriculum, fees, or any rules and regulations, and to refuse further registration to a student whom his instructors believe to be incompetent in scholarship or otherwise unfit to continue his course.

2. *Physical and medical examination.*—Every medical student must report at the office of the University Health Service in the Clinics for physical and medical examination during the first two weeks of his residence in the Medical School. Each student must show evidence of satisfactory vaccination against smallpox. The University seeks to maintain the best possible sanitary and hygienic conditions in the matter of (*a*) purity of water and food supply, (*b*) sanitary conditions of all buildings and rooms used in any way by students, (*c*) prevention of contagious diseases, and (*d*) restraining students from undertaking work for which they are physically unfit. The co-operation of all students is requested in carrying out this purpose.

Failure to report for a medical examination within the first two weeks of the quarter or to keep an appointment already made necessitates the payment of a late fee of $2.00. This fee should be paid to the Hospital Cashier, the University Clinics, and the receipt brought to the Health Service.

The privileges of the University Health Service include all ambulatory medical treatment which can be given by the Health Service staff, emergency treatment at the hospitals when the Health Service is not open, ordinary laboratory tests, hospitalization for two weeks for any single illness, professional services during hospitalization, X-rays as recommended by the Health Service staff, consultations at other clinics if necessary, and operating-room fees for emergency operations.

The privileges do not include elective operations, private rooms, special nurses, medicines, and special expensive dressings, appliances, or treatments provided through the University Clinics.

House calls on students in the University district are made by physicians of the regular Health Service staff for a nominal charge.

In Rush Medical College a Health Service on the plan of voluntary health insurance is administered through the office of the Dean. Health examinations are required.

3. *The University year.*—The University year is divided into four quarters of about twelve weeks each. The Autumn, Winter, and Spring quarters begin about the first of October, January, and April, respectively, and the Summer Quarter immediately after the close of the Spring Quarter. The Summer Quarter is divided into two equal terms.

4. *Attendance of undergraduates.*—It is expected that students will regard an engagement with an instructor or other University appointment as they regard any other engagement and that the customary rules of courtesy will be observed.

ADMISSION

First- and second-year classes are limited to 65 in each class; the third- and fourth-year classes are limited to 60 in the Divisional School and to 100 in Rush Medical College.

Students begin the medical work in the Summer, Autumn, or Spring quarters. Applications should be made as early as possible and not later than November for the following Spring; January for the Summer; and February for the Autumn. The Committees on Admissions select from among the applicants those who may be admitted. The selection is based on scholarship, aptitude, and character—in short, on the possession of those qualities judged necessary or desirable in the study and practice of medicine.

I. REQUIREMENTS FOR ADMISSION TO THE MEDICAL SCHOOLS

A. Three years of University work are required for admission to the Medical Schools, including:

1. Two years of college work devoted to general education, including studies in the social sciences and the humanities in addition to the physical and biological sciences, as required for admission into the Division of the Biological Sciences.

2. Adequate training in physics, chemistry, biology, mathematics, and psychology. It is recommended that this include:
   In chemistry—quantitative analysis and organic chemistry.
   In mathematics—trigonometry or elementary mathematical analysis.
   In physics—mechanics, electricity, heat, light, and sound.
   In biology—laboratory courses in vertebrate zoölogy, physiology, and embryology. Either embryology or physiology, but not both, may be taken in the autumn with the medical work.
   In psychology—a general introductory course.

3. A reading knowledge of German or French; German preferred. This is tested by examination, except as exceptionally good records are approved by the Committee on Admission.

This preparation required under 2 and 3 can ordinarily be completed by the end of the first year in the Division, that is, the end of the third year of college or university work.

B. Selection by the Committees on Admissions. Evidence of interest and ability in research commends applicants to the Committees on Admissions.

C. Approval of physical condition by the Student Health Service.

II. SUGGESTIONS REGARDING COLLEGE PREPARATION FOR MEDICINE

The study and practice of medicine is so wide a field that it offers opportunity for exercise of many different kinds of special training and ability. Understanding of the organization of society, of its machinery and history, and skill in communication with others are desirable. Some of the lines along which training may well be sought in the university are: the use of the English language, physics, psychology, physical chemistry, advanced biology, elements of the structure and physiology of plants, advanced mathematics, history, economics, sociology, Latin, Greek, drawing.

The Council on Education of the American Medical Association has made some suggestions regarding individual subjects to be included in college work preparatory for medicine. These have been adopted by many state boards of medical licensure and are required. The state boards require only two years (or sixty semester hours) of college work, and students completing three or four years of work in the university go far beyond these suggestions in some or all lines. Their requirements are:

A. The minimum of collegiate credit required for entrance to approved medical schools shall be not less than two full academic years, which shall include English, theoretical and practical courses in physics and biology, and general and organic chemistry, completed in institutions approved by accrediting agencies acceptable to the Council. Three years or more in college is recommended.

B. Admission to approved medical schools may also be by examination under the following conditions:

1. Candidates who have completed two years of collegiate instruction and present evidence of general scholarship of high order, but who lack credits in not more than two of the required subjects, may be admitted on passing examinations in these subjects.

2. Candidates who have completed three years of collegiate instruction and present evidence of having accomplished work of distinction in one or more fields of learning, but who lack credit in any or all of the required subjects, may be admitted on passing examinations in these subjects.

A list of colleges of arts and sciences approved by the various national and regional standardizing agencies has been prepared by the Council for the guidance of medical schools in the selection of students. Exception may be made in that any school may admit applicants who have fulfilled the requirement in American or Canadian institutions not approved by such accrediting agencies, provided the applicant gives evidence of superior ability.

All collegiate instruction given in satisfaction of this requirement must be based on the same entrance requirements and must be of the same quality and standard of in-

struction as that required for a baccalaureate degree in the institution in which the candidate receives his preparation.

Licensing boards of the various states require evidence of the completion of certain preliminary education in advance of matriculation in a recognized medical school before candidates are admitted to examinations for license to practice. The requirements in any particular state may be ascertained in the office of the Dean of Students.

III. ADMISSION AS STUDENTS-AT-LARGE IN THE MEDICAL COURSES

Persons who are qualified for admission to the University, but who do not wish to register as candidates for a degree, may with the permission of the appropriate dean be admitted to the University as students-at-large. Persons interested in this opportunity for study should write to the Entrance Counselor.

Registration of students-at-large in the medical courses is subject to the approval of the dean of the school or college concerned. In the case of students coming from other medical schools, the University requires (1) a statement of good standing from the dean of the school previously attended, (2) a recommendation from that dean for registration in the courses desired here, and (3) an official transcript showing the satisfactory completion of courses prerequisite to those desired here.

IV. ADMISSION WITH ADVANCED STANDING IN THE MEDICAL COURSES

Students from other medical schools receive credit for work successfully completed in them, provided the Committee on Admissions admits them and judges the work already completed equivalent to the work required in the University of Chicago. Such students must have fulfilled the requirements for admission to the Medical Schools of this University.

Students from other schools applying for admission to the clinical work of the third year must present official transcripts showing in a manner satisfactory to the Committees on Admissions the completion of the admission requirements and of medical work judged equivalent to that of the first two years in the medical course of this School including Pathology 301 and 302; and must show satisfactory evidence of ability to read German or French. In cases of doubt the applicant is required to pass any or all departmental examinations and the language examinations of the Medical Schools of this University.

V. PROCEDURE FOR ADMISSION

A student seeking admission to the Medical Schools is requested to write to the Entrance Counselor, The University of Chicago, Cobb Lecture Hall, Room 105, for an application form, which is to be filled out fully and returned, together with an official itemized transcript of the student's college record, including a statement of his high-school record and a letter of honorable dismissal, to the Director of Admissions, Cobb Lecture Hall, Room 105. If admission is granted the applicant, both he and the appropriate dean will be notified; if it is denied, the applicant will be notified.

Students are not necessarily admitted even though their records meet the specific requirements. There have usually been many more qualified applicants than available places.

MATRICULATION AND REGISTRATION

A. *Time of registration.*—Students in residence register in advance for following quarters on the days announced on the bulletin boards and in the *Weekly Calendar.* Students registering in the University for the first time may register in advance or on the first day of the quarter.

B. *Order of procedure.*—Registration is initiated in the office of the student's dean, continued in the office of the Registrar, and concluded in the office of the Bursar. A student who has been admitted to the University presents himself first to the Dean of Students. From that point he is directed how to proceed. In the Summer and Autumn quarters, registration is conducted in Bartlett Gymnasium; students report first at Leon Mandel Hall for complete instructions.

C. *Changes in registration.*—After the second day of the quarter (first week for graduate students) change of registration is permitted only (1) with the consent of the Dean, and (2) on payment of a fee of $1.00 for each instance of change. When changes are necessitated by the University, no fee is required.

All changes in registration must be made officially in the office of the Dean of Students. This applies to courses dropped, courses added, and changed from one course to another.

CONTINUANCE

Continuance of students is subject to recommendations and conditions made by the Committee on Promotions and Degrees. In case of unsatisfactory work (below the grade of C) continuance and the award of degrees or certificates are subject to special requirements made by this Committee. Students may be refused further registration in the medical courses if in the judgment of the Committee they are incompetent in scholarship or otherwise unfit to continue the course.

DEFICIENCIES IN MEDICAL COURSES

A. A student's work is *deficient* when either the quality or quantity of work done is not acceptable to the instructor. A qualitative deficiency is indicated by the grade reported. A quantitative deficiency is reported as "incomplete," with indication of the deficiency. The instructor may, at his option, reduce the grade or the amount of credit because of inadequate work throughout the quarter or excessive absence from whatever cause.

B. If a deficiency is not removed within the student's next quarter of residence, or if the student is not meanwhile in residence within eighteen months of the time it was incurred, the student must repeat the course to receive credit. A course lacking final examination may be completed, with the consent of the Dean and the instructor, by passing either (1) a special examination administered through the office of the Home-Study Department (fee $2.50) or (2) the regular class examination at the end of the student's next quarter of residence, provided the course is again offered in that quarter. Any incomplete course must be completed to the satisfaction of the instructor.

GRADUATION

Work in the Medical Schools of the University may lead to:*

1. The degree of Doctor of Medicine.
2. The degree of Doctor of Medicine with Honors.
3. The degree of Master of Science.
4. The degree of Doctor of Philosophy.

Recommendation for any of these awards is conditional upon the maintenance of unexceptionable conduct while a student in the University.

1. *The degree of Doctor of Medicine.*—This degree is awarded after twelve quarters of satisfactory full-time work in a medical school approved by the University. The work of the last three quarters must have been done in the University of Chicago.

2. *The degree of Doctor of Medicine with Honors.*—This degree is awarded when the student, in addition to meeting with distinction (an average of at least B) the minimum requirements for the degree of Doctor of Medicine, has also done productive research work and prepared a thesis constituting an actual contribution to knowledge. Honors are awarded in one department, on the recommendation of that department approved by the Faculty.

3 and 4. *The degrees of Master of Science and Doctor of Philosophy.*—Statement of the conditions under which these degrees are awarded appears in the *Announcements of the College and the Divisions.*

Post-doctorate medical work.—Special advanced work may be undertaken by candidates holding the degree of Doctor of Medicine. (See page 16.)

FEES

Fees are payable to the Bursar on or before the first day of each quarter. Registration is not complete till the fees are paid. After the fifth day (second day in Rush Medical College) membership in the University is granted only with the special consent of the Dean and the payment of a fee of $5.00 for late registration. (For special charges, see p. 95.)

1. *Registration fee.*—A registration fee of $3.00 is required quarterly of each student who has not paid the matriculation fee. Students who have paid only a part of the matriculation fee are required to pay the balance of that fee according to previous arrangements, but are exempt from the payment of the registration fee.

2. *Health Service fee.*—Quarterly, $3.00.

3. *Tuition fee.*—The tuition fee in the Medical Schools is $150 a quarter. Medical students pay this fee during at least twelve quarters.

A candidate for the degree of Doctor of Medicine may have his tuition fee fixed at $50 a quarter under the following conditions: (*a*) that he has paid in the aggregate full tuition for six quarters of clinical work at the University; and (*b*) that he continues to take additional work in partial fulfilment of the requirements for the degree of Doctor of Medicine.

This adjustment of tuition fees may be made by the Dean of Students in the Division of the Biological Sciences, Cobb Lecture Hall, Room 216.

* *The degree of Bachelor of Science.*—Students who enter the Medical Schools after three years of university or college education may if they so desire qualify for this degree while in the Medical Schools, in accordance with requirements stated in the *Announcements of the College and the Divisions.*

Holders of fellowships and graduate service scholarships are not entitled to a reduction of fees under this rule.

4. *Graduation fee.*—The graduation fee is $20, payable when any degree is awarded.

PROGRAMS OF WORK

I. THE FIRST TWO (PRECLINICAL) YEARS

The work of the first two (preclinical) years is offered only in the School of Medicine on the Quadrangles. At least 18 courses and six quarters of full-time work are required; 17½ of the courses are devoted to a basic medical program required of all medical students. (See page 17.) Advanced courses may be substituted for those in the basic program subject to the approval of instructors. One of the 18 courses is elective. Subject to approval by the Dean of Students, elective courses may be taken in any field connected with medicine.

Students may not register in the clinical courses until the work of the first two years is satisfactorily completed. The departmental examination in pathology is deferred to the end of the third year, although at least two courses in pathology are required in the second year. Conjoint Clinical Course 301 is required before registration for clinical work in the University hospitals.

II. THE THIRD AND FOURTH (CLINICAL) YEARS

At present the work of the third and fourth (clinical) years may be done either on the Quadrangles or at Rush Medical College. After the Autumn Quarter of 1940 students may not begin the work of the third year at Rush.

1. ON THE QUADRANGLES

At least six quarters and 18 courses are required in clinical work.

Five of the six quarters are devoted to externships as indicated in the table on page 18. Throughout these quarters the students are part of the hospital organization, with definite responsibilities toward patients. Training and instruction are largely by supervised doing.

Throughout the third year students serve as hospital externs—a quarter each in medicine and surgery, and a term each in obstetrics-gynecology and pediatrics. Conjoint Clinical Course 302, continuing throughout the year, is included in these externships. The departmental examination in pathology is given at the end of the third year. Its scope corresponds to the content of courses 301, 302, and the pathologic work in the hospital externships.

During the fourth year two quarters are devoted to externships in the out-patient department—one in medicine (course 323) and one in surgery (courses 304, 311, and 321). Out-patient work in obstetrics-gynecology and in pediatrics is elective. Conjoint Clinical Course 350, continuing throughout the year, is part of these externships. Except for Conjoint Clinical Course 350, one quarter in the fourth year is given over entirely to elective work. Departmental examinations are given during the last quarter of the fourth year in *medicine*, in *obstetrics-gynecology*, in *pediatrics*, and in *surgery*. The scope of these examinations corresponds to the content of the basic clinical course, including Conjoint Clinical Courses 301, 302, and 350, Pediatrics 305, and Obstetrics-Gynecology 305. The student may defer all or part of these examinations to a seventh

quarter if he elects to register for more than six full quarters in clinical work. (See statement concerning reduced fee for seventh quarter of clinical work, p. 14.)

Courses are offered during the Summer Quarter as in other quarters, and the externships are available in September.

2. IN RUSH MEDICAL COLLEGE

Requirements:

6.0 courses in medicine, including nervous and mental diseases, materia medica, therapeutics, jurisprudence, and toxicology; 1.5 courses in pediatrics; 4.5 courses in surgery; 3.0 courses in obstetrics and gynecology; 0.8 course in otolaryngology; 1.0 course in ophthalmology; 1.0 course in dermatology; 1.2 courses in pathology; and 2.0 courses elected, subject to the approval of the Dean, in any clinical departments. (NOTE.—Twenty-one courses in Rush are equivalent to 18 courses on the Quadrangles.) The student must pass the departmental examinations in each of the departments and subjects.

Work satisfactorily completed in the clinical courses of either of these schools is recognized in full in the other. Students are strongly advised not to undertake work in both schools during any one quarter. Transfer for any quarter from one division to the other must be arranged with the Dean well in advance; when both divisions are full transfer is necessarily by exchange of students.

NOTE.—Admission to State Board Examinations for license to practice medicine is contingent in some states on the satisfactory completion of certain courses in the Medical School. Specific information concerning the requirements in any state may be obtained in the office of the Dean of Students, or by writing the American Medical Association, 535 N. Dearborn Street, Chicago, for "Abstract of Laws and Board Rulings" (price sixty cents). The Illinois law governing license to practice in this state requires evidence that the minimum time between the commencement of the work of the Freshman year and the ending of the work of the Senior year, on which all students are required to be in attendance, shall be not fewer than forty months, and evidence of attendance on four full courses of lectures of at least nine months in four separate years. The Illinois law requires further that all applicants graduated since July, 1923, must also have completed a course of training of not fewer than twelve months in a hospital approved by the Department of Registration and Education.

III. POST-DOCTORATE MEDICAL WORK

Opportunities and facilities for post-doctorate work exist in many departments of the Medical Schools. Attention is invited to the conditions under which such work may lead to the S.M. degree or to the Ph.D. degree as stated in the departmental announcements. Programs of work leading toward specialization in the work of clinical departments or divisions of departments are already organized, or are in process of organization, and may be undertaken by suitably qualified Doctors of Medicine. Previous correspondence with, and acceptance by, the department concerned is required.

In addition, the Rush Graduate School of Medicine is being organized.

PROGRAM OF THE BASIC MEDICAL COURSE

(On the Quadrangles)

First Year

	Monday	Tuesday	Wednesday	Thursday	Friday
Autumn					
8:00					Biochem. A
9:00	Biochem. 201	Biochem.	Biochem.	Biochem.	Dis. A Biochem. A
10:00					Dis. A Biochem. A
11:00		Dis. A301–2			Dis. A Biochem. A
1:30		Dis. A and B	Dis. A and B		Dis. B Biochem. B
2:30		Dis. A and B	Dis. A and B		Dis. B Biochem. B
3:30		Dis. A and B	Dis. A and B		Dis. B Biochem. B
4:30					Biochem. B
Winter					
8:00	Biochem. 202	Biochem.	Biochem.	Biochem.	Biochem. A
9:00	Hist. A305	Hist.	Hist.	Hist.	Biochem. A
10:00	Hist.	Hist.	Hist.	Hist.	Biochem. A
11:00		Dis. A303 or 4		Dis.	Biochem. A
1:30		Dis.		Dis.	Biochem. B
2:30		Dis.		Dis.	Biochem. B
3:30		Dis.		Dis.	Biochem. B
4:30					Biochem. B
Spring					
8:00	Physl. 251	Physl.	Physl.	Physl.	Physl. A
9:00	Bact. 202	Bact.	Bact.		Physl. A
10:00	Bact.	Bact.	Bact.		Physl. A
11:00	Bact.	Dis. A303 or 4	Bact.	Dis.	Physl. A
1:30		Dis.		Dis.	Physl. B
2:30		Dis.		Dis.	Physl. B
3:30		Dis.		Dis.	Physl. B
4:30					Physl. B

Second Year

	Monday	Tuesday	Wednesday	Thursday	Friday
Autumn					
8:00	Physl. 252	Physl.	Physl.	Physl.	Physl. A
9:00	Path. 301	Path.	Path.	Path.	Physl. A
10:00	Path.	Path.	Path.	Path.	Physl. A
11:00	Neur.		Neur.		Physl. A
1:30	Neur. A306	Neur.	Neur.		Physl. B
2:30	Neur.	Neur.	Neur.		Physl. B
3:30					Physl. B
4:30					Physl. B
Winter					
8:00	Physl. 303	Physl.	Physl.	Physl.	Physl. A
9:00	Path. 302	Path.	Path.		Physl. A
10:00	Path.	Path.	Path.		Physl. A
11:00	Path.	Par. B & P 204	Path.		Physl. A
1:30		Par.			Physl. B
2:30		Par.			Physl. B
3:30		Par.			Physl. B
4:30		Med. 301		Med. 301	Physl. B
Spring					
8:00	Pharm. 301	Pharm.	Pharm.	Pharm.	
9:00	C. Clin. 301		C. Clin.		
10:00	C. Clin.		C. Clin.		
11:00	C. Clin.		C. Clin.		
1:30			C. Clin.	Pharm. A C, Clin. B	Pharm. B C, Clin A
2:30		C. Clin.	C. Clin.	Pharm. A C, Clin. B	Pharm. B C, Clin. A
3:30		C. Clin.	C. Clin.	Pharm. A C, Clin. B	Pharm. B C, Clin. A
4:30					

Note.—Beginning with 1939, students may commence medical work also in the Spring or the Summer Quarter and follow a consecutive program through the year. Special individual programs will be made in the Office of the Dean of Students for students who wish to devote more time to elective courses or to research.

Third Year

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Autumn						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
9:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Extern.	Extern.	Extern.	Extern.	Extern.	
2:30	Extern.	Extern.	Extern.	Extern.	Extern.	
3:30	Extern.	Extern.	Extern.	Extern.	Extern.	
4:30		Path.			Path.	
Winter						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
9:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Extern.	Extern.	Extern.	Extern.	Extern.	
2:30	Extern.	Extern.	Extern.	Extern.	Extern.	
3:30	Extern.	Extern.	Extern.	Extern.	Extern.	
4:30	Path.	Path.			Path.	
Spring						
8:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern
9:00	Extern.	Extern.	Extern.	Extern.	Extern	Extern.
10:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
11:00	Extern.	Extern.	Extern.	Extern.	Extern.	Extern.
12:00	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302	C.C. 302
1:30	Extern.	Extern.	Extern.	Extern.	Extern.	
2:30	Extern.	Extern.	Extern.	Extern.	Extern.	
3:30	Extern.	Extern.	Extern.	Extern.	Extern.	
4:30	Path.	Path.			Path.	

Note.—These are hospital externships in medicine, surgery, obstetrics-gynecology, and pediatrics. One-third of the class is necessarily assigned to each externship. The work may be commenced in the Summer Quarter and continued through September. The departmental examinations in pathology are given at the end of this year.

Fourth Year

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
One Quarter						
8:00	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350
9:00	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323
10:00	or	or	or	or	or	or
11:00	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 304
12:00	Sur. 321	Sur. 321	Sur. 321	Sur. 321	Sur. 321	
1:30	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323	
2:30	or	or	or	or	or	
3:30	Sur. 304	Sur. 304	Sur. 304	Sur. 304	Sur. 304	
4:30					Path.	
One Quarter						
8:00	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350	C.C. 350
9:00	Med. 323	Med. 323	Med. 323	Med 323	Med. 323	Med. 323
10:00	or	or	or	or	or	or
11:00	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 311	Sur. 304
12:00	Sur. 321	Sur. 321	Sur. 321	Sur. 321	Sur. 321	
1:30	Med. 323	Med. 323	Med. 323	Med. 323	Med. 323	
2:30	or	or	or	or	or	
3:30	Sur. 304	Sur. 304	Sur. 304	Sur. 304	Sur. 304	
4:30					Path.	

One Quarter.—C. Clin. 350—8:00 to 9:00 A.M., Path. 4:30 Friday. Otherwise elective.

Note.—One-third of the class is necessarily assigned to each of the three quarterly programs.

THE SCHOOL OF MEDICINE OF
THE UNIVERSITY OF CHICAGO

THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

THE DEPARTMENT OF ANATOMY

OFFICERS OF INSTRUCTION

Charles Henry Swift, Secretary of the Department of Anatomy.

Basil Coleman Hyatt Harvey, A.B., M.D., Professor of Anatomy.
George William Bartelmez, Ph.D., Professor of Anatomy.
Charles Henry Swift, M.D., Ph.D., Associate Professor of Anatomy; Student Counselor.
William Bloom, A.B., M.D., Associate Professor of Anatomy.
Stephen Polyak, M.D., Associate Professor of Anatomy.
Wilton Marion Krogman, Ph.D., Associate Professor of Anatomy.
Friedrich Wassermann, M.D., Associate Professor of Anatomy, Zoller Memorial Dental Clinic.
Melvin H. Knisely, Ph.D., Assistant Professor of Anatomy.
Sylvia Holton Bensley, A.B., M.D., Instructor in Anatomy.
Harold B. Kenton, Ph.D., Instructor in Preventive Medicine.
Jeannette B. Obenchain, Ph.D., Research Associate in Anatomy.
Truman S. Potter, S.B., M.D., Research Associate and Seymour Coman Fellow in Preventive Medicine.
Eleanor Antoinette Conway, Ph.D., Instructor in Anatomy.
Caroline May Bensley, S.B., Research Assistant in Anatomy.
Isadore Rossman, Ph.D., Assistant in Anatomy.
David Barrett Clark, Ph.D., Research Assistant in Neuroanatomy, Otho S. A. Sprague Memorial Institute.

Robert Russell Bensley, A.B., M.D., Sc.D., Professor Emeritus of Anatomy.
Charles Judson Herrick, Ph.D., Sc.D., Professor Emeritus of Neurology.
Preston Kyes, A.M., M.D., Sc.D., Professor Emeritus of Preventive Medicine.

FELLOWS, 1939–40

Matthew Harold Block, S.M.
Arnold Lazarow, S.B.

INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology.

Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy and vertebrate embryology precede the work in human anatomy.

Admission to the Division of Biological Sciences is required of all students taking courses in the Department. Elementary physics and organic chemistry are recommended.

All students taking courses in anatomy should have a good knowledge of French and German. For candidates for higher degrees this is indispensable.

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the Division.

HIGHER DEGREES

The Divisional requirements are stated on pages 71–74, *Announcements of the College and the Divisions.*

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental prerequisites: Candidates for the degree of Master of Science in Anatomy are required to complete work in anatomy amounting to 9 courses, of which 3 courses must be in research.

The Divisional degree.—The Divisional degree is not awarded by the Department.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Candidates for the degree of Doctor of Philosophy in Anatomy should have undergraduate credit for the medical courses in anatomy, or the equivalent. Advanced courses are selected after consultation with the Department. At least eight months before the final Doctor's examination, the candidate must have passed a preliminary examination.

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to take the courses in anatomy listed in the medical program.

The degree of Doctor of Medicine *with honors* in Anatomy is recommended when the student, in addition to completing all the work of the medical course with exceptional merit, has completed investigative work and prepared a dissertation acceptable to the Department.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

203. Evolution of Man (identical with Anthropology 203).—A background study of human evolution. The course considers theories and principles of organic evolution, primate origins and kinships, early types of man, the biological classification of races and their present distribution. C. Autumn, M.–Th., 9:00, Krogman.

***211. Cytology and the Simple Tissues.**—C. Spring, M.–Th., 1:30–3:30, S. H. Bensley.

***301–6. The Medical Courses in Anatomy.**—Lectures and laboratory work in human dissection, histology, and neurology. The division of this work into courses is simply for convenience in registration and distribution of material.

***301, 302. Dissection of the Upper and Lower Extremities.**—A complete dissection of these parts using atlases to learn the nomenclature. The skeleton studied coincidently in conference classes. The work demonstrated daily to instructors with frequent conferences in the laboratory. 1½Cs. Summer: laboratory, Tu.–Th., 2:30–5:30; Autumn: lecture, Th., 11:00; laboratory, *sec. a*, Tu., W., 1:30–4:30, F., 9:00–12:00; *sec. b*, Tu., W., F., 1:30–4:30; Winter: laboratory, Tu.–Th., 1:30–4:30; Spring: laboratory, Tu., W., F., 1:30–4:30; Harvey, Swift, Krogman, Knisely, S. H. Bensley.

*303. **Dissection of Thorax and Abdomen.**—C. Autumn: laboratory, Tu., Th., 1:30–4:30; Winter: lecture, Tu., 11:00; laboratory, Tu., Th., 1:30–4:30; Spring: lecture, Tu., 11:00; laboratory, Tu., Th., 1:30–4:30; HARVEY, SWIFT, KROGMAN, KNISELY, S. H. BENSLEY.

*304. **Dissection of Head and Neck.**—C. Autumn: laboratory, Tu., Th., 1:30–4:30; Winter: lecture, W., 11:00; laboratory, Tu., Th., 1:30–4:30; Spring: lecture, W., 1:30; laboratory, Tu., Th., 1:30–4:30; HARVEY, SWIFT, KROGMAN, KNISELY, S. H. BENSLEY.

*305. **Histology.**—A course on the structure of the tissues and the organs of the body. C. Winter, M.–Th., 9:00–11:00; BLOOM, S. H. BENSLEY, CONWAY.

NOTE.—Anatomy 305 is for medical and graduate students only. Undergraduates may be admitted only after consultation with the Department.

*306. **Neurology.**—A course on the structure of the nervous system and sense organs. Prerequisite: Zoölogy 220, Anatomy, 304, 305. C. Autumn: lecture, M., W., 11:00; laboratory, M.–W., 1:30–3:30; Spring, M.–Th., 1:30–3:30; BARTELMEZ, POLYAK, S. H. BENSLEY, CONWAY.

311. **Introductory Physical Anthropology** (identical with Anthropology 311).—C. Winter, 10:00, KROGMAN.

312. **Advanced Physical Anthropology** (identical with Anthropology 312).—C. Spring, W., F., 3:30–5:30, KROGMAN.

Anthropology 314. Races of Man.—Winter, M., F., 3:30–5:30, KROGMAN.

315. **Laboratory Work in Physical Anthropology** (identical with Anthropology 315).—Spring, hours to be arranged, KROGMAN.

NOTE.—For descriptions of Courses 311, 312, and 315 see the Anthropology announcements.

*316. **Elementary Neurology.**—A course especially designed for nonmedical graduate students; others admitted after consultation with the instructor. Autumn: lecture, M., Tu., W., 8:00; laboratory, Th., F., 8:00–10:00, OBENCHAIN.

*323. **Structure of the Female Reproductive Organs.**—Prerequisite: Zoölogy 220 and histology. Autumn, hours to be arranged, BARTELMEZ.

*324. **Organogeny.**—A course based on the human embryological collection, about 1,200 specimens. A single system or several systems of organs studied in detail. Limited to 5 students. Prerequisite: Histology and embryology. C.–2Cs. Autumn, Winter, Spring, hours to be arranged, BARTELMEZ.

*325. **Anatomy of Sense Organs.**—The gross and minute structure of eye and ear, their functions and associated nervous pathways. C. Spring, hours to be arranged, POLYAK.

*333. **Morphology and Histogenesis of the Blood and Connective Tissues.**—Spring, hours to be arranged, BLOOM, CONWAY.

*341. **Advanced Work.**—Opportunities for advanced work in all branches of anatomy. C.–2Cs. each quarter. Hours to be arranged, HARVEY, BARTELMEZ, SWIFT, BLOOM, KNISELY, S. H. BENSLEY, CONWAY.

349, 350. **History of Anatomy.**—A continuous course on the history of anatomy running through the Autumn and Winter quarters. ½C. each quarter. Hours to be arranged, SWIFT.

*401. **Anatomical Research.**—The laboratory is equipped for research in the following fields: Gross anatomy, neurology, histology, cytology, tissue culture, and embryology under the direction of the staff. Registration only after consultation with the instructors. C.–2Cs. each quarter. Hours to be arranged, HARVEY, BARTELMEZ, SWIFT, BLOOM, POLYAK, KNISELY, S. H. BENSLEY, CONWAY.

THE DEPARTMENT OF BACTERIOLOGY AND PARASITOLOGY

OFFICERS OF INSTRUCTION

William Hay Taliaferro, Chairman of the Department of Bacteriology and Parasitology.

Clay G Huff, Secretary of the Department.

William Hay Taliaferro, Ph.D., Eliakim Hastings Moore Distinguished Service Professor of Parasitology; Dean of the Division of the Biological Sciences.

Stewart Arment Koser, Ph.D., Associate Professor of Bacteriology; Student Counselor.

Clay G Huff, Sc.D., Associate Professor of Parasitology.

Gail Monroe Dack, Ph.D., M.D., Associate Professor of Bacteriology.

Lucy Graves Taliaferro, Sc.D., Volunteer Research Associate in Parasitology.

William Burrows, Ph.D., Assistant Professor of Bacteriology.

R. Wendell Harrison, Ph.D., Assistant Professor of Bacteriology, Walter G. Zoller Memorial Dental Clinic.

Francis Byron Gordon, Ph.D., M.D., Assistant Professor of Bacteriology.

Dan H. Campbell, Ph.D., Assistant Professor of Bacteriology.

Lyman E. Fourt, Ph.D., Instructor in Bacteriology; Mr. and Mrs. Frank G. Logan Research Fellow.

Ellen Davison, A.B., Research Assistant in Bacteriology.

Thomas Michael Floyd, S.B., Assistant in Bacteriology.

Cessa Klüver, S.B., Volunteer Research Assistant in Parasitology.

Leo Robert Melcher, S.B., Assistant in Parasitology.

George Green Wright, Jr., A.B., Assistant in Bacteriology.

Sam Berkman, S.M., Assistant in Bacteriology.

Joan Alexander Lorr, S.B., Assistant in Bacteriology.

Frederic E. Caldwell, Ph.B., Assistant in Parasitology.

Herman N. Bundesen, M.D., Professorial Lecturer on Health Administration.

FELLOWS, 1939–40

José Oliver-Gonzalez, S.M., Mr. and Mrs. Frank G. Logan Research Fellow in Parasitology.

Frank Milton Schabel, S.B., Fellow in Bacteriology and Parasitology.

Avivah Zuckerman, S.M., Fellow in Bacteriology and Parasitology.

INTRODUCTORY

The Divisional requirements for degrees are stated on pages 71–74, *Announcements of the College and the Divisions.*

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, and 6 elective courses, in addition to work completed in the College.

HIGHER DEGREES

A dissertation must be submitted as part of the requirement for the degrees of Doctor of Philosophy and the Departmental Master of Science. The work on which this dissertation is based may be done in any of the fields represented in the Department, such as bacteriology, parasitology, or immunology.

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—A satisfactory dissertation is required; and, in addition to the equivalent of the requirement for the Bachelor's degree, 9 courses in the Department or related departments are required. The courses must be selected with the approval of the Chairman of the Department.

The Divisional degree.—Departmental prerequisites: A scholastic achievement equivalent to Courses 201, 225, 307, and 320. For general requirements see Divisional announcement concerning this degree (p. 73, *Announcements of the College and the Divisions*).

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—A dissertation presenting the results of original research is required. This research must be conducted under the direction of the Department. In addition, Courses 201, 307, and 320 must be satisfactorily completed, together with such other courses offered by this Department or related departments as may be determined in consultation with the Chairman of the Department.

THE DEGREE OF DOCTOR OF MEDICINE

The course requirements for the degree of Doctor of Medicine in the Department of Bacteriology and Parasitology are listed in the table on page 17.

Students who elect to become candidates for the degree of Doctor of Medicine *with honors* in the Department of Bacteriology and Parasitology must have (1) maintained a better than average grade for the four years of the medical curriculum and (2) done advanced work in excess of the minimum requirements as stated above, during at least three quarters, leading to the preparation of a dissertation acceptable to the Department and constituting an actual contribution to knowledge.

DEPARTMENTAL CLUB

All candidates for higher degrees in the Department are expected to attend the meetings of the Bacteriology and Parasitology Club, which are held on alternate Thursdays throughout the year under the direction of members of the staff.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

***201. General Bacteriology.**—Lecture and laboratory instruction in the fundamental principles of bacteriology and their applications, as based upon study of representative types of bacteria and allied micro-organisms. Designed for general science students. Prerequisite: Chemistry 104, 105, 120, Botany 101, and Zoölogy 101 or equivalent. C. Summer, M.–F., 10:00–12:00; Autumn, M., W., F., 1:30–4:30; Koser. (Spring, University College, Burrows.)

***202. Medical Bacteriology.**—A lecture and laboratory course in the study of pathogenic bacteria, viruses, and immunology. Prerequisite: Admission to Medical School. C. Spring, M., W., 9:00–12:00; Tu., 9:00–11:00; Dack, Burrows, Gordon.

*204. **Medical Parasitology.**—Lectures and laboratory work upon the animal parasites of medical importance. Prerequisite: Admission to Medical School. ½C. Winter, Tu., 11:00, 1:30–4:30, Huff.

*215. **Immunology.**—Designed to give beginning students the general principles of serology and the cellular and humoral mechanisms of resistance to invading micro-organisms. Lectures and laboratory work. Prerequisite: Bacteriology 201. C. Spring, M.–F., 10:00–12:00, Campbell.

225. **Public Health** (identical with Nursing Education 225).—A lecture course covering the fundamental aspects of the epidemiology of the infectious diseases, with emphasis upon the general biological aspects of the host-parasite relationship. C. Autumn, Tu.–F., 9:00, Burrows.

304. **Immunology.**—Lectures and class discussions in problems of immunity as pertaining to bacteria, parasites, and filterable viruses. Prerequisite: Bacteriology 202 or 307, and 320. ½C. Winter, hours to be arranged, Campbell and Staff.

305. **The Cytotropic Viruses.**—Includes filterable viruses and rickettsias. Lectures, demonstrations, and class discussions on general topics and the specific diseases in this field. Prerequisite: Bacteriology 202 or 307. ½C. Winter, hours to be arranged, Gordon.

*307. **The Pathogenic Bacteria.**—The study, by lecture, conference, and laboratory methods, of pathogenic bacteria and the principles of infection and immunity. For non-medical students. Prerequisite: Bacteriology 201 and consent of instructor. C. Summer, Winter, M.–F., 8:00–10:00, Dack, Gordon.

315. **Physiology of Bacteriology.**—The fundamental aspects of physiological processes: growth, metabolism, fermentation, enzymes, influence of physical and chemical environment. Lectures and discussions. Prerequisite: Bacteriology 201, 307 (or 202), Chemistry 221 or Biochemistry 201, and consent of instructor. ½C. Winter, W., Th., F., 11:00, Koser.

*320. **Parasitology.**—A general survey of our knowledge of the parasites of man and animals. In three approximately equal parts: (1) protozoölogy, (2) helminthology, and (3) arthropods of parasitological importance. Limited to 15. Prerequisite: Consent of the Department and Zoölogy 101 or invertebrate zoölogy. C. Autumn, M.–F., 1:30–3:30, Huff.

351. **Public Health.**—See Conjoint Clinical Courses, page 31.

*370. **Advanced Bacteriology and Parasitology.**—Advanced work and research in the various fields of departmental specialization. Designed for students working toward higher degrees, but also available to a limited number of qualified students from other departments and to graduates in medicine. Prerequisite: Consent of individual staff member with whom the student registers. Each quarter, hours to be arranged, Staff.

316. **Bacterial Physiology.**—[Not given in 1940–41.]

THE DEPARTMENT OF BIOCHEMISTRY

OFFICERS OF INSTRUCTION

FRED CONRAD KOCH, Chairman of the Department of Biochemistry.

FRED CONRAD KOCH, PH.D., Frank P. Hixon Distinguished Service Professor of Biochemistry.

MARTIN EDWARD HANKE, PH.D., Associate Professor of Biochemistry; Student Counselor.

THOMAS FRANCIS GALLAGHER, PH.D., Assistant Professor of Biochemistry.

ELIZABETH MILLER KOCH, PH.D., Research Associate in Biochemistry.

EARL ALISON EVANS, JR., PH.D., Assistant Professor of Biochemistry.

ALBERT DORFMAN, PH.D., Research Associate in Biochemistry.

ALBERT MINTZ POTTS, PH.D., Research Assistant in Biochemistry.

ROBERT STEELE, S.B., Research Assistant in Biochemistry.

GEORGE WINCHESTER BEACH, PH.B., Research Assistant in Biochemistry.

J. ROBERT COFFMAN, S.M., Research Assistant in Biochemistry.

JOSEPH JAMES CEITHAML, S.B., Research Assistant in Biochemistry.

LEONARD R. HINES, A.B., Research Assistant in Biochemistry.

ROGER F. VARNEY, A.B., Research Assistant in Biochemistry, Otho S. A. Sprague Memorial Institute.

WILLIAM P. LONG, S.B., Assistant in Biochemistry.

FRANK SMITH, JR., S.B., Assistant in Biochemistry.

EDWIN E. HAYS, S.M., Research Assistant in Biochemistry.

KARL FREDERICK SWINGLE, S.B., Assistant in Biochemistry.

JOHN JOSEPH SCHNEIDER, S.B., Assistant in Biochemistry.

PAUL LEWIS MUNSON, A.M., Assistant in Biochemistry.

EDWARD A. DOISY, PH.D., Professor of Biochemistry, St. Louis University School of Medicine (Summer, 1940).

CYRIL NORMAN HUGH LONG, SC.D., M.D.C.M., Sterling Professor of Physiological Chemistry, Yale University (Summer, 1940).

JAMES BATCHELLER SUMNER, PH.D., Professor of Biochemistry, Cornell University Medical School (Summer, 1940).

FELLOW, 1939–40

PAUL LEWIS MUNSON

INTRODUCTORY

The Department offers courses in biochemistry for (1) medical students, (2) graduate students in the physical and biological sciences, and (3) those who wish advanced work in biochemistry in preparation for research or teaching careers in this field.

The Department is particularly desirous of stimulating research, but only when the student has been properly prepared to do the work well. After the research is under way, the student is advised to devote practically all his time to that study.

It is advisable that a student who proposes to specialize in this Department should

obtain a broad scientific foundation, including work in the cognate sciences. Specifically, it is recommended that the student pursue the following courses in introduction: Physics 105, 106, 107; Mathematics through calculus; Chemistry 104, 105, 120, 221, 222, 240, 261; Physiology 202, 203; Zoölogy 101; Botany 101, 202; Geology 101 or 102; and, in addition, modern languages, courses in histology, bacteriology, and comparative anatomy of vertebrates.

THE BACHELOR'S DEGREE

On admission to the Division, each undergraduate student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the College. This program includes Chemistry 221, 222, 230, 240, and 261, and a minimum of 3 courses in biochemistry: Biochemistry 201, 202, and 1 or more courses from Biochemistry 301, 302, and 311. Other courses in this program may be Physiology 202, 203; Zoölogy 205, 220; Anatomy 305 or 309; Bacteriology 201; Physics 105, 106, 107; Mathematics 215, 216.

HIGHER DEGREES

The Divisional requirements are stated on pages 71–74, *Announcements of the College and the Divisions.*

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental requirements: (1) Research for at least two quarters (Course 401); (2) 6 graduate courses; (3) a thesis; and (4) participation in the Departmental seminar. The courses that may be counted toward the Master's degree in Biochemistry are 301, 302, 303, 304, 311, 321, 331. After consultation with the Chairman of the Department, courses in related departments may be substituted in part for courses in biochemistry.

Before consideration as a candidate for the Master's degree in Biochemistry, the student is required (1) to prove his ability to read German and (2) to pass written examinations in analytical, organic, and physical chemistry and biochemistry. The scope of these examinations is covered by Chemistry 120, 221, 222, 230, 240, 261, and Biochemistry 201 and 202. The chemistry examinations are given on the fourth Friday of the Autumn and Spring quarters; the biochemistry examinations, on the fourth Saturday of the same quarters. The former should be taken during the first quarter of graduate residence, the latter in the first quarter following the completion of Biochemistry 202. All these examinations must be taken at least two months before the degree is to be conferred.

The Divisional degree.—Departmental prerequisites: (1) Biochemistry 201, 301, 302, 303; (2) 2 courses from Biochemistry 304, 311, 321, and 331; (3) a bibliographic or historical essay on some phase of biochemistry; and (4) a final oral examination. The Divisional requirements are a broad training in biology and the courses in chemistry and physics required as prerequisites for the courses in biochemistry.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental requirements.—Advanced courses in biochemistry—301, 302, 303, 304, 311, 321, 331; Physiology 251 and 252; courses in advanced organic and special topics in chemistry; courses in comparative anatomy, histology, and bacteriology, and such

additional courses as may be chosen to aid the student in his research problem. Emphasis is placed upon the student's scholarship and ability to carry on original and accurate research. All graduate students in the Department are required to take part in the seminars, to follow current biochemical literature, and to develop a knowledge of the history of the science.

Before admission to candidacy for the Doctor's degree, the student is required (1) to prove his ability to read German and French, (2) to pass preliminary examinations in analytical, organic, and physical chemistry, and biochemistry, and (3) to make a very good record in Biochemistry 301, 302, and 303. The scope of the examinations is covered by Chemistry 120, 221, 222, 230, 240, 261, and Biochemistry 201 and 202. The chemistry examinations are offered regularly on the fourth Friday and the biochemistry on the fourth Saturday of the Autumn and Spring quarters. These examinations must be taken within the first four quarters of specialization in the Department. Research work done prior to passing these preliminary examinations is not credited toward completion of course requirements unless permission is granted through special petition to the Department. In most cases the student must complete the requirements for admission to candidacy before he is assigned to a research problem. In every case permission from the Chairman of the Department must be obtained before the student is allowed to begin on a research problem. Quarterly conferences with the Chairman on the next quarter's registration are required.

THE DEGREE OF DOCTOR OF MEDICINE

The requirements for the degree of Doctor of Medicine include at least 2 courses in biochemistry—either 201 and 202 or 301, 302, and 303.

In addition to the work above outlined, a candidate for the degree of Doctor of Medicine *with honors* in Biochemistry must have maintained a better than average grade for the four years of the medical curriculum, and is required to prepare a thesis based upon independent research. Additional courses are advised in each case, to be taken as far as possible in this Department. The candidate's program should be so arranged that the research problem will extend over a period of three or more quarters. The candidate should also take part in the departmental seminars.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

NOTE.—The prerequisites indicated for Biochemistry 301, 302, and 303 must be required for regular medical students and for those who major in biochemistry, but special students may make arrangements after consultation with the instructor to enter the courses without the specific requirements.

***201. Chemistry of Cell Constituents.**—First required course for medical, undergraduate, and graduate students. Chemistry of the carbohydrates, lipins, proteins, etc. Prerequisite: General and organic chemistry, qualitative and quantitative analysis. C. Summer: lecture, M.–Th., 8:00; laboratory, F., 8:00–12:00; Autumn: lecture, M.–Th., 8:00, laboratory, F., *sec. a*, 1:30–5:30; *sec. b*, 8:00–12:00; HANKE AND ASSISTANTS. (Spring, University College, one section, evenings: lecture, M., Tu., 7:00–8:30; W., 7:00–8:00; laboratory, Tu., 8:30–10:30; W., 8:00–10:00; GALLAGHER AND ASSISTANTS.)

***202. Chemistry of Digestion, Metabolism, and Excretion.**—Second required course for medical and undergraduate students. Lectures only required for students majoring for higher degrees in biochemistry. Prerequisite: Biochemistry 201. C. Winter: lecture, M.–Th., 8:00; laboratory, F., *sec. a*, 1:30–5:30; *sec. b*, 8:00–12:00; HANKE AND AS-

SISTANTS. (Summer, University College, one section, evenings: lecture, M.–W., 7:00–8:20; laboratory, Tu., W., 8:30–10:20; EVANS AND ASSISTANTS.)

*301. **Advanced Chemistry of Carbohydrates, Lipins, and Proteins.**—Graduate course for students who wish to take advanced work in biochemistry and for medical students who wish to emphasize the chemical aspect in their training. Prerequisite: Quantitative analysis, physical chemistry, and organic chemistry, i.e., Chemistry 120 and 221 or their equivalents, and Biochemistry 201 or equivalent. C. (½C. for lectures only.) Winter: lecture, M.–W., 1:30; laboratory, *sec.a*, Tu., W., 9:00–12:00; *sec. b*, M.–W., 2:30–4:30; *sec. c*, Th., F., 1:30–4:30; EVANS, GALLAGHER.

*302. **Hydrogen-Ion Activity, Oxidation-reduction Potentials, Acid Base Metabolism.**—A graduate course following Course 301. Prerequisite: Physical chemistry and Biochemistry 202. C. (½C for lectures only.) Spring: lecture, M., Th., F., 1:30; laboratory, Tu., W., *sec. a*, 9:00–12:00; *sec. b*, 1:30–4:30; HANKE.

*303. **Chemistry of Metabolism.**—An advanced course covering enzymes, intermediary metabolism, internal secretions, vitamins, and excretions. Prerequisite: Biochemistry 301, 302. C. (½C. for lectures only.) Autumn: lecture, M., W., Th., 1:30; laboratory, *sec. a*, Tu., W., 9:00–12:00; *sec. b*, M.–W., 2:30–4:30; EVANS, GALLAGHER.

*304. **Physicochemical Methods Applied to Biochemical Problems.**—The theoretical discussion and practical application of various physicochemical methods and considerations. Prerequisite: Biochemistry 301, 302, and physical chemistry. C. Winter; HANKE.

*311. **Advanced Blood and Urine Microchemical Methods.**—A critical lecture and laboratory treatment of various methods and the significance of the results. Prerequisite: Biochemistry 202 or 303 ½C.–C. Spring, KOCH.

*321. **Biochemical Preparations.**—The preparation of amino acids and derivatives, carbohydrates and derivatives, hormones and other substances, depending on the experience of the student. The work may be continued through several quarters. Prerequisite: Biochemistry 201. C. each quarter, GALLAGHER, EVANS.

331. **The Biochemistry of Internal Secretions.**—A lecture course. Prerequisite: Biochemistry 201 and 202; or 301, 302, and 303. ½C. Summer, Tu., W., Th., 4:30–5:45; Winter, KOCH.

*352. **Special Problems in Pharmacology.**—Advanced and independent laboratory instruction and conferences. In co-operation with the Department of Pharmacology. Assay work on drugs, hormones, and vitamins. Open to a limited number of students. Prerequisite: Pharmacology 351. C. Autumn, Spring, BIOCHEMISTRY AND PHARMACOLOGY STAFFS.

*401. **Research in Biochemistry.**—C.–2Cs. each quarter. KOCH, HANKE, GALLAGHER, EVANS.

410. **Seminar in Biochemistry.**—A joint seminar with the departments of Pharmacology and Physiology for the presentation of research reports. Every quarter, weekly, one hour, M., 4:30, ALL MEMBERS OF THE DIFFERENT STAFFS.

CONJOINT CLINICAL COURSES

Three conjoint courses are offered by the several clinical departments in co-operation:

301. Introductory Courses in Physical Diagnosis and History-Taking.—A course given jointly by the departments of Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, and Pharmacology, consisting of a general introduction to the organization of the hospital, the techniques of physical, psychiatric, and laboratory diagnosis, the methods of history-taking, and principles of surgery, pediatrics, obstetrics, and toxicology. Intended specifically to prepare students for clinical externships in the University of Chicago Clinics. Students planning to register for these externships are given preference in registration for 301. Prerequisite: Pathology 301. Daily: Autumn, M., 3:30–5:30; Tu., 11:00–12:00, 3:30–5:30; W., 3:30–5:30; Th., 11:00–12:00, 1:30–5:30; *sec. a*, F., 1:30–5:30; *sec. b*, F., 8:00–12:00. Spring, M., 9:00–12:00; Tu., 2:30–4:30; W., 9:00–12:00, 1:30–4:30; *sec. a*, Th., 1:30–4:30; *sec. b*, F., 1:30–4:30. CLINICAL STAFF; EISELE, Secretary.

302. Clinical Lectures.—Clinical lectures given jointly by the departments of Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, and Pathology, as a supplement to the externships, in each of which it is included. *Medicine* occupies two days weekly as follows: Summer, miscellaneous lectures; Autumn, diseases of the chest and heart; gastro-intestinal; neurology; Winter, renalvascular diseases and infectious diseases; Spring, metabolism, psychiatry, and dermatology. *Surgery* occupies two days a week as follows: Summer, miscellaneous; Autumn, mainly diseases of the head, neck, nervous system, and thorax; Winter, mainly diseases of the abdomen and urology; Spring, mainly diseases of the extremities. *Obstetrics and Gynecology* occupies one hour a week. *Pediatrics* occupies one hour a week covering general pediatrics and contagious diseases. Credit included in externships in the hospital. Other students may take the course as one course. Daily, 12:00–1:00. Monday, 4:30–5:30, diseases of the gastro-intestinal tract. *Pathology:* special classes in necropsy, pathology, and special pathology are held on Tu., Th., 4:30 P.M., Summer, Autumn, and Spring. *Neuropathology:* Tu., 4:30 P.M., Winter. *Gynecological pathology:* Th., 4:30 P.M., Winter. *Medicine:* M., 4:30 P.M., Autumn. CLINICAL STAFF; DRAGSTEDT, Secretary.

350. Clinical Lectures.—Clinical lectures given jointly by the departments of Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics as a supplement to externships in the out-patient departments. *Medicine* occupies two days a week as follows: Summer, miscellaneous lectures; Autumn, roentgenology; Winter, gastro-intestinal diseases, allergy, and psychiatry; Spring, infectious diseases, hematology, and metabolism (Tu., Th., M137). *Surgery* devotes two days a week to general surgery (M., F., M137). *Obstetrics and Gynecology* occupies one day a week (S., Dora DeLee Hall). *Pediatrics* occupies one day a week (W., M137). Daily 8:00–9:00. Credit included in externships in out-patient departments. Other students may take 350 as one course. CLINICAL STAFF; REUTERSKIOLD, Secretary.

351. Public Health.—Lectures given by the departments of Bacteriology and Parasitology, Medicine, Obstetrics and Gynecology, Pediatrics, and Surgery. They deal with public health aspects of water, milk, and food supply, sewage disposal, infant welfare, child psychology, and school hygiene. Public health problems concerning important infectious diseases are emphasized. Current problems of industrial diseases are discussed, emphasizing pneumoconiosis, occupational injuries, and occupational cancer. Maternal hygiene is dealt with from the standpoints of preconceptional, antepartum, intrapartum, and postpartum care. Prevention and control of gynecologic diseases, venereal and malignant, are stressed. Some consideration is given to vital statistics, epidemiology, and public health administration. $\frac{1}{6}$C. each quarter. Autumn, Winter, Spring, M., 12:00–1:00. STAFF, DACK, Secretary.

THE WALTER G. ZOLLER MEMORIAL DENTAL CLINIC

OFFICERS OF INSTRUCTION

James Roy Blayney, Director of the Walter G. Zoller Memorial Dental Clinic.

James Roy Blayney, S.M., D.D.S., Professor of Dental Surgery.
Friedrich Wassermann, M.D., Associate Professor of Anatomy.
Sigmund Francis Bradel, D.D.S., B.M.E., Assistant Professor of Dental Surgery.
R. Wendell Harrison, Ph.D., Assistant Professor of Bacteriology.
Benjamin Frank Miller, S.B., Ch.E., M.D., Assistant Professor.
Harold Judd Noyes, S.B., D.D.S., M.D., Research Associate in Dental Surgery.
Zelma Baker, Ph.D., Research Associate.
Herbert Paul Steinmeyer, D.D.S., S.B., Assistant in Dental Surgery.
Robert M. Wiener, D.D.S., S.B., Assistant in Dental Surgery.
Elizabeth Hemmens, S.B., Assistant in Bacteriology.
Ellis Burnett Jump, A.B., D.M.D., Assistant in Dental Surgery.
Ned Blanchard Williams, A.B., D.D.S., Assistant in Dental Surgery.
Frank Siegfried Wozniak, D.D.S., Assistant in Dental Surgery.
Harold Jerome Goldberg, D.D.S., Assistant in Dental Surgery.
Truman G. DeWitt, D.D.S., Assistant in Dental Surgery.

Through the generous gift of the late Walter G. Zoller, the University of Chicago has established a dental clinic for the study and treatment of dental disease of indigent patients. The facts that the main clinic is located in Billings Hospital, with branch clinics in the Chicago Lying-in Hospital and the Home for Destitute Crippled Children, and that the dental clinics are closely related to the University Clinics give assurance that an ample opportunity will be afforded for such a study.

The clinical service is limited to the indigent. Dental care is given without fee. This includes those procedures commonly known as operative and prosthetic restorations, therapeutic treatments, and minor oral surgery—extractions, cysts, and fractures. Unexcelled opportunities are offered for advanced training in clinical dentistry and the fundamental biological sciences. An appointment to a fellowship or an assistantship will be given to recent dental graduates who are prepared for graduate study in the Division of Biological Sciences.

Seminars, lectures, and conferences are held frequently.

Medical students are assigned to the dental clinic for instruction in dental disorders. Investigation and research in the field of dentistry and allied subjects are undertaken.

DEPARTMENT OF MEDICINE

OFFICERS OF INSTRUCTION

George Frederick Dick, Chairman of the Department of Medicine.

Paul Chesley Hodges, Ph.D., M.D., Professor of Roentgenology.
Oswald Hope Robertson, S.M., M.D., Professor of Medicine.
George Frederick Dick, M.D., Sc.D., Professor of Medicine.
David Slight, M.B., Ch.B., D.P.M., M.R.C.P.(C)., Professor of Psychiatry.
Joseph Almarin Capps, A.M., M.D., Clinical Professor of Medicine.
Walter Wile Hamburger, S.M., M.D., Clinical Professor of Medicine.
Dudley Billings Reed, A.B., M.D., Professor of Hygiene; Director of Health Service.
Emmet Blackburn Bay, S.B., M.D., Professor of Medicine.
Alexander Brunschwig, S.M., M.D., Professor of Roentgenology.
Samuel William Becker, S.B., M.D., Associate Professor of Dermatology, Kuppenheimer Foundation.
Robert Gustav Bloch, M.D., Associate Professor of Medicine.
Louis Leiter, Ph.D., M.D., Associate Professor of Medicine, Lasker Foundation.
Charles Phillip Miller, S.M., M.D., Associate Professor of Medicine, Kuppenheimer Foundation.
Walter Lincoln Palmer, Ph.D., M.D., Associate Professor of Medicine.
Rudolf Schindler, M.D., Associate Professor of Medicine.
William Ernest Cary, Ph.D., M.D., Assistant Clinical Professor of Medicine.
Marie Ortmayer, Ph.B., M.D., Assistant Clinical Professor of Medicine.
Theodore Edward Friedemann, Ph.D., Assistant Professor of Chemical Bacteriology; Bartlett Memorial Fellow.
Ruth Elaine Taylor, S.B., M.D., Assistant Clinical Professor of Medicine, Health Service.
E. S. Guzmán Barrón, S.B., M.D., Assistant Professor of Biochemistry, Lasker Foundation.
Maximilian Ernest Obermayer, M.D., Assistant Professor of Dermatology, Kuppenheimer Foundation.
Knute Axel Reuterskiold, Ph.D., M.D., Assistant Professor of Medicine.
Alden Kinney Boor, Ph.D., Assistant Professor of Biochemistry, Kuppenheimer Foundation.
Alf Alving, S.B., M.D., Assistant Professor of Medicine, Kenneth G. Smith Fund.
Irene Sandiford, Ph.D., Assistant Professor of Medicine.
Richard Biddle Richter, S.B., M.D., Assistant Professor of Medicine, Morton D. Hull Fund for Medical Research.
Frederic Eastland Templeton, S.B., M.D., Assistant Professor of Roentgenology.
Allan Titsworth Kenyon, Ph.B., M.D., Assistant Professor of Medicine.
Hugh Thompson Carmichael, M.D.C.M., S.M., Assistant Professor of Psychiatry.
Benjamin Frank Miller, S.B., Ch.E., M.D., Assistant Professor of Medicine.
Lillian Eichelberger, Ph.D., Assistant Professor of Biochemistry, Lasker Foundation.
Wright Adams, S.B., M.D., Assistant Professor of Medicine, Kenneth G. Smith Fund.

Henry Tubbs Ricketts, S.B., M.D., Assistant Professor of Medicine.
Luke Weldon Hunt, S.M., M.D., Assistant Professor of Medicine.
Jules Hymen Masserman, M.D., Assistant Professor of Psychiatry.
Ward Campbell Halstead, Ph.D., Assistant Professor of Experimental Psychology in the Division of Psychiatry, Otho S. A. Sprague Memorial Institute.
Theodore Johnston Case, S.B., M.D., Assistant Professor of Neurophysiology in the Division of Psychiatry, Otho S. A. Sprague Memorial Institute.
Anna Hamann, M.D., Assistant Professor of Roentgenology.
Henry Walter Brosin, A.B., M.D., Assistant Professor of Psychiatry.
Kathleen Muir, A.B., M.D., Instructor in Dermatology.
Charles Wesley Eisele, S.M., M.D., Instructor in Medicine.
A. Hughes Bryan, S.B., M.D., Instructor in Medicine.
Harold Clifford Wagner, S.M., M.D., Instructor in Medicine.
Richard Sternheimer, M.D., Instructor in Medicine, Lasker Foundation.
Eva Ruth Balken, Ph.D., Instructor in Psychology in the Division of Psychiatry, Otho S. A. Sprague Memorial Institute.
Joseph Barnett Kirsner, M.D., Instructor in Medicine.
Gustave Freeman, Ph.B., M.D, Instructor in Medicine.
William B. Tucker, A.B., M.D., Instructor in Medicine.
Gurth Ernest Carpenter, M.B., Ch.B., M.R.C.P., Instructor in Medicine, Douglas Smith Foundation.
George Gömöri, M.D., Instructor in Medicine, Douglas Smith Foundation.
Edward Bigg, A.B., M.D., Instructor in Medicine, Douglas Smith Foundation.
Joan Fleming, A.M., M.D., Instructor in Psychiatry.
Frances Hannett, S.M., M.D., Instructor in Psychiatry, Health Service.
Adrian Hold Vander Veer, A.B., M.D., Instructor in Psychiatry
Stephen Rothman, M.D., Instructor in Dermatology.
Daniel Warren Stanger, Ph.D., Instructor in Psychiatry, Otho S. A. Sprague Memorial Institute.
Charles L. Dunham, A.B., M.D., Instructor in Medicine.
Alice Childs, S.B., M.D., Instructor in Medicine.
Kathryn Knowlton, Ph.D., Instructor in Medicine.
Clayton G. Loosli, Ph.D., M.D., Instructor in Medicine, Douglas Smith Foundation.
Helen Van Sant, Assistant in Medicine.
Daniel Stevens, Ph.D., Research Assistant in Medicine.
Carl M. Lyman, Ph.D., Instructor in Medicine, Kenneth G. Smith Fund.
J. Robert Coffman, S.M., Research Assistant in Medicine.
Harry William Woolhandler, M.D., Assistant in Dermatology.
Abraham W. Marcovich, S.B., M.D., Assistant in Roentgenology.
Andrew J. Brislen, S.B., M.D., Assistant in Medicine.
Enid C. Rodaniche, Ph.D., Research Assistant in Medicine, Douglas Smith Foundation.
Richard Coar Boyer, S.B., M.D., Assistant in Roentgenology.
Seymour Gray, A.B., M.D., Assistant in Medicine.
Walter E. Hook, A.B., M.D., Assistant in Medicine.
Dorothea F. Turner, S.M., Assistant in Medicine.
George A. Nicoll, S.B., M.D., Assistant and Assistant Resident in Roentgenology.
John Lumice Ferry, A.B., M.D., Assistant in Medicine.

Alf Torp Haerem, S.B., M.D., Assistant in Medicine.
Wesley Wilson, M.D., Assistant in Dermatology.
Vincent Paul Graham, A.B., M.D., Assistant and Assistant Resident in Roentgenology.
Alfred Joseph Klein, S.B., M.D., Assistant in Medicine.
Francis Blonek, M.D., Assistant in Roentgenology.
John L. Batty, M.D., Assistant in Medicine.
George Arthur Boylston, S.M., M.D., Assistant and Resident in Medicine.
David Kahn, A.B., M.D., Assistant and Resident in Dermatology.
Charles Covert Scott, Ph.D., M.D., Assistant in Medicine.
Charlotte Gertrude Babcock, A.B., M.D., Assistant and Resident in Psychiatry.
Russell Hedley Morgan, A.B., M.D., Assistant and Assistant Resident in Roentgenology.
Thomas Watson Sherman, M.D., Assistant in Dermatology.

FELLOW, 1939–40

Stephen Rothman, M.D., Commonwealth Fund Fellow.

INTRODUCTORY

The Department of Medicine, as at present organized, represents the fields of general medicine, neurology, psychiatry, dermatology, and roentgenology. Instruction in all of these fields will be offered during the academic year 1940–41.

The Department occupies the Frank Billings Medical Clinic, which by virtue of its intimate physical relationship with the Albert Merritt Billings Hospital and the Max Epstein Clinic, concentrates all of the activities of the Department in a single architectural unit.

The Albert Merritt Billings Hospital provides approximately one hundred beds for the Department of Medicine, while the Max Epstein Clinic provides space and facilities for the examination and treatment of out-patients. The laboratories of the Department are equipped for the methods now usually employed in the investigation of disease, either in the study of the individual patient or in the advancement of knowledge concerning disease. They include the laboratories for physiology, bacteriology, serology, and chemistry.

PLAN OF INSTRUCTION

The Department of Medicine aims to present the subject matter of medicine, that is to say, of disease, as a branch of human knowledge. It recognizes that instruction in this subject may be sought by the student for diverse reasons and with diverse ends in view. For this reason the courses have been planned with the view of presenting the range and variety of the subject matter of disease, so far as personnel and facilities permit, rather than of attempting to compress the whole of medicine into a standardized curriculum. Various orderly sequences are possible to meet various needs, and the Department undertakes to advise students in the selection and arrangement of courses when such advice is desired. Series of courses are suggested which will enable the average student studying for the degree of Doctor of Medicine to cover the ground required by the Department to fulfil State Licensing Board requirements.

Experience has shown that the subject matter of disease is best taught by allowing students both direct contact with patients and the opportunity to observe the actual

work of investigators in clinical medicine. Therefore, the plan of instruction involves the division of the student body into small groups for the purpose of providing the maximum contact between students and patients and between instructors and students. The practical experience of the student is supplemented by the necessary amount of didactic instruction.

Each student whose work in the Department warrants it is assigned laboratory space according to his requirements, and he has access to this at all hours of the day or night. He also has access to equipment which is provided for common use, such as centrifuges, balances, sterilizers, incubator rooms, refrigerators, and hoods. It is the intention to provide each student with the facilities of a *medical* laboratory and to put these facilities freely at his disposal.

Students whose work brings them in contact with patients are required to wear clean white coats, of a design specified by the Department, whenever they enter parts of the Clinic to which patients are admitted.

RESEARCH

In addition to assuming the task of teaching medicine, the Department places emphasis on its study of advancing knowledge with respect to disease. While the primary efforts of the Department in investigation are directed toward the study of disease processes, it is recognized that strict adherence to this imposes limits which are too narrow, and that investigations in the Department may touch on all branches of science contributory to medicine. Students may pursue investigations under the direction of members of the Department, or, if properly qualified, may work independently, and such facilities as the Department has at its disposal are offered to research students and independent investigators. The Department already possesses funds from several endowments for the specific purpose of advancing medical knowledge.

For the purpose of carrying on its clinical and teaching duties and its research the Department is loosely subdivided into sections, each with a chief who has primary responsibility for dissertations based on studies pursued within his division and under his direction.

FELLOWSHIPS

A number of fellowships, open to suitably qualified students, are available for research in the Department of Medicine. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded to graduate students (with or without the M.D. degree) on recommendation of the Chairman of the Department, to whom application for further information should be made.

DEGREES

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Admission to study for the degree of Master of Science in the Department of Medicine is made upon the recommendation of the Departmental Committee on the Master of Science Degree.

The Department of Medicine recommends students for the degree of Master of Science in the Division of the Biological Sciences when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree, including three full quarters of special advanced work.

2. Presentation of a satisfactory dissertation embodying the results of original research in one of the following fields: general medicine, neurology, psychiatry, dermatology, roentgenology, or biochemistry.

3. Certification of the candidate's fulfilment of the foreign-language requirements. Examination in ability to read German or French.

4. Successful completion of a course of study as approved by the Departmental Committee.

5. Successful completion of the Master's examination, designed to test the candidate's general medical knowledge as covered by Medicine 303 and 323, and his competency in his chosen field.

The Divisional degree.—The Divisional degree is not awarded in the Department.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Admission to study for the degree of Doctor of Philosophy in the Department of Medicine is based upon recommendation of the Departmental Committee on the Degree of Doctor of Philosophy. The student is admitted to candidacy upon passing a preliminary examination covering the field of general medicine. The scope of this examination is covered by Medicine 303 and 323.

The Department of Medicine recommends students for the degree of Doctor of Philosophy in the Division of the Biological Sciences when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree, including three years of special advanced work.

2. Presentation of a dissertation embodying the results of original research in one of the following fields: general medicine, neurology, psychiatry, dermatology, roentgenology, or biochemistry. This must form an actual contribution to existing knowledge and be worthy of publication in a journal devoted to the medical sciences. Simple case studies or reports are not considered as coming within this definition.

3. Successful completion of the Doctor's examination. The candidate is examined not only as to his depth of knowledge in the particular fields treated by his dissertation but also as to his breadth of knowledge in general medicine and the medical sciences as a whole.

4. Certification by the appropriate departments of the candidate's fulfilment of the foreign-language requirements. Ability to read German and French is required.

5. Successful completion of a course of study as approved by the Departmental Committee.

THE DEGREE OF DOCTOR OF MEDICINE

The Department of Medicine certifies students as having received the approval of the Department for the degree of Doctor of Medicine when the following requirements have been met:

1. Satisfactory completion of not fewer than 4½ courses on the graduate level (including advanced standing for work done elsewhere) in general medicine, neurology, psychiatry, dermatology, and roentgenology, of which not fewer than 3 courses shall have been in this Department.

2. Satisfactory completion of a written, practical, and oral examination covering the entire field of general medicine, neurology, psychiatry, dermatology, and roentgenology. This examination covers the field to which Courses 303 and 323 are devoted.

3. The M.D. degree *with honors* in Medicine is recommended on the basis of a better than average grade for the four years of the medical curriculum, and additional work in the Department leading to a thesis, which must have been presented to and accepted by the Department. The topic must have been chosen by the end of the Junior year and the Chairman of the Department notified of the topic. The thesis must have been submitted to the instructor under whose direction the work was done not later than two months preceding the granting of the four-year certificate.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

I. GENERAL MEDICINE

Conjoint Clinical Course 301. Introductory Course.—See page 31.

Conjoint Clinical Course 302.—See page 31.

Conjoint Clinical Course 350.—See page 31.

303. Externship in Hospital.—A course including Conjoint Clinical Course 302. Students make rounds daily with the chiefs of the various hospital services. They are assigned to patients and present their histories for discussion and criticism at these periods. Prerequisite: Pathology 302. 3Cs. Summer, Autumn, Winter, Spring, STAFF OF THE MEDICAL DEPARTMENT.

320. Clinical Conferences.—Required of the externs. No credit. W., 4:30–5:30.

***323. Externship in Out-Patient Department. Medicine.**—Students assigned to various special clinics in rotation in order to cover the fields of medicine as completely as possible. This course includes Conjoint Clinical Course 350. Prerequisite: 3Cs. of Medicine 303 or the equivalent. Summer, Autumn, Winter, Spring, STAFF; REUTERSKIOLD, Secretary.

353. Arthritis. Out-Patient Department.—¼C. Summer, Autumn, Winter, Spring, M., 2:00–4:30, HUNT.

354. Medical Jurisprudence.—½C. Autumn, Th., 4:30, ———.

355. Medicine III. Out-Patient Department.—¼C. (M. or F.), or ½C. (M. and F.), Summer, Autumn, Winter, Spring, M., F., 1:00–4:30, STAFF.

357. Diseases of the Chest. Out-Patient Department.—¼C. Summer, Autumn, Winter, Spring, M., 2:00–4:30, BLOCH.

360. Advanced Gastroenterology: Gastroscopy.—Limited to 1 student per quarter. Prerequisite: Consent of Department and adequate training in this special field. 3Cs. Summer, Autumn, Winter, SCHINDLER.

361. Seminar in Endocrinology.—¼C. Spring, M., 3:30–4:30, KENYON, RICKETTS.

370. Clinical Electrocardiography.—Limited to 2 to 6 students. ¼C. Autumn, M., 2:00–4:30, ADAMS.

371. Applied Bacteriology and Serology.—Limited to 2 to 6 students. ¼C. Autumn, F., 2:00–4:30, HUNT.

372. Advanced Clinical Biochemistry and Physiology.—This course may be taken as a laboratory course, limited to 1 or 2 students. ½C. M., F., 2:00–4:30. It may also be taken as a seminar by 2 to 6 students. No credit. F., 2:00–3:30. Autumn, B. MILLER; Winter, ALVING; Spring, BARRÓN.

374. Infectious Diseases.—Limited to 3 to 4 students. ¼C. Winter, F., 2:30–4:00, ROBERTSON, C. P. MILLER.

381. Clinical Pathology Seminar.—¼C. Summer, M., 2:00–3:30, REUTERSKIOLD.

401–4. Research and Advanced Courses in the Department of Medicine.—Open to qualified students by arrangement with the chief of the division concerned. C.–3Cs. DICK.

* Required for all advanced courses.

401. Chemical Division.—BARRÓN, EICHELBERGER.

402. Physiological Division.—LEITER, PALMER, ALVING, KENYON, RICKETTS.

403. Biological Division.—ROBERTSON, MILLER, FRIEDEMANN.

404. Diseases of the Respiratory System.—BLOCH, TUCKER.

405. Research in Gastroenterology.—PALMER, SCHINDLER.

Weekly conferences are held with the Department of Pathology and the clinical departments, on correlation of clinical study of cases with morbid anatomy. No credit. One hour a week. Medical conference, W., 4:30; pathological conference, F., 4:30.

II. DERMATOLOGY

Conjoint Clinical Course 301.—See page 31.

Conjoint Clinical Course 302.—See page 31.

323. Externship in the Out-Patient Department.—See page 38.

328. Externship in the Out-Patient Department. Dermatology.—Prerequisite: 2½Cs. of Medicine 323 or equivalent. ½C.–C. Recommended for ½C. Summer, Autumn, Winter, Spring, morning hours, BECKER, OBERMAYER, MUIR.

345. Therapy of Syphilis.—Therapy as modified by all types of syphilitic processes. By arrangement, 3 hours a week, BECKER, OBERMAYER, MUIR.

362. Advanced Dermatology.—Instruction in dermatologic histopathology, bacteriology, parasitology, and immunology. C.–3Cs. Lectures and demonstrations, BECKER, OBERMAYER.

415. Research in Dermatology.—A course open to qualified students by arrangement with chief of division. C.–3Cs. a quarter. BECKER, OBERMAYER.

III. NEUROLOGY

Conjoint Clinical Course 301.—See page 31.

Conjoint Clinical Course 302.—See page 31.

303. Externship in Hospital.—See page 38.

323. Externship in Out-Patient Department.—See page 38.

331. Externship in Out-Patient Department.—Limited to 4 students. Prerequisite: 2 courses of Medicine 323 or equivalent. ½C. Summer, Autumn, Winter, Spring, M., T., Th., F., RICHTER, BUCHANAN.

Conjoint Clinical Course 350.—See page 31.

416. Research in Diseases of the Nervous System.—Open to qualified students by arrangement with the chief of the section. C.–3Cs. RICHTER, BUCHANAN.

IV. ROENTGENOLOGY

350. Roentgenology Lectures.—Autumn, Tu., Th., 8:00–9:00 A.M., Billings Hospital M137, HODGES, BRUNSCHWIG, TEMPLETON, HAMANN.

366. Clinical Roentgenology.—Practical work in diagnostic and therapeutic roentgenology. Equivalent to the work required of an assistant resident. C.–3Cs. each quarter. HODGES, BRUNSCHWIG, TEMPLETON, HAMANN.

367. Advanced Clinical Roentgenology.—A continuation of Medicine 366. Equivalent to the work required of a senior assistant resident or resident. C.–3Cs. each quarter, HODGES, BRUNSCHWIG, TEMPLETON, HAMANN.

412. Irradiation Seminar.—No registration. No credit. Visiting physicians and medical students welcome. Autumn, Winter, Spring, Th., 7:00–8:30 P.M., HAMANN.

413. Roentgenology Seminar.—No registration. No credit. Visiting physicians and medical students welcome. Summer, hours to be arranged; Autumn, Winter, Spring, W., 7:00–8:30 P.M., Billings Hospital M137; HODGES, TEMPLETON, AND OTHERS.

414. Research in Roentgenology.—As a rule, students do not register for credit in this course until after the completion of work equivalent to Courses 366 and 367. C.–3Cs. HODGES, BRUNSCHWIG, TEMPLETON, HAMANN.

Related Course in Department of Physics: Physics 349, Physics of Roentgenology.—Spring, M., 8:00–5:00. See page 310.

V. PSYCHIATRY

301. Medical Psychology.—Lectures. Prerequisite: Admission to the School of Medicine, or consent of instructor. ½C. Autumn, M., W., 11:00; Winter, Tu., Th., 4:30, SLIGHT AND OTHERS.

Conjoint Clinical Course 301.—Spring. See page 31.

Conjoint Clinical Course 302.—Spring. See page 31.

303. Externship in Hospital.—See page 38.

323. Externship in Out-Patient Department.—SLIGHT, CARMICHAEL, MASSERMAN, BROSIN, FLEMING. See page 38.

Conjoint Clinical Course 350.—Winter. See page 31.

333. Ward Visits: Psychiatry.—Prerequisite: Consent of instructor. ½C. SLIGHT.

364. Advanced Psychiatry.—Prerequisite: Consent of instructor. SLIGHT.

417. Research in Psychiatry.—By arrangement with the Head of the Division. C.–3Cs. SLIGHT.

Psychiatric Seminar.—No credit, Open to all medical students and to others by arrangement. Summer, Autumn, Winter, Spring, M., 4:30, STAFF.

THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

OFFICERS OF INSTRUCTION

Fred Lyman Adair, Chairman of the Department of Obstetrics and Gynecology.

Fred Lyman Adair, A.M., M.D., Mary Campau Ryerson Professor of Obstetrics and Gynecology.

William Joseph Dieckmann, S.B., M.D., Associate Professor of Obstetrics and Gynecology.

M. Edward Davis, S.B., M.D., Associate Professor of Obstetrics and Gynecology.

Henry Close Hesseltine, S.M., M.D., Assistant Professor of Obstetrics and Gynecology.

Franklin Faust Snyder, S.B., M.D., Assistant Professor of Obstetrics and Gynecology.

Lucile Hac, Ph.D., Instructor in Obstetrics and Gynecology, A. B. Kuppenheimer Foundation.

Priscilla Ouda, M.D., Instructor in Obstetrics and Gynecology; Chief Anesthetist, Chicago Lying-in Hospital.

Edith Louise Potter, M.D., Ph.D., Instructor in Obstetrics and Gynecology.

Ruth Maude Watts, Ph.D., Instructor in Obstetrics and Gynecology, Douglas Smith Foundation.

Melbourne Wells Boynton, Ph.B., M.D., Instructor in Obstetrics and Gynecology.

Charlotte Louise Clancy, M.D., Instructor and Chief Resident in Obstetrics and Gynecology.

Edwin Francis Daily, M.D., Instructor in Obstetrics and Gynecology.

Gordon Taylor Burns, S.B., M.D., Instructor and Chief Resident in Obstetrics and Gynecology.

John Harold Morton, S.B., M.D., Instructor in Obstetrics and Gynecology.

Donald Milo Schuitema, S.B., M.D., Assistant and Resident in Obstetrics and Gynecology.

Simon Lloyd Wolters, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

Max Costin, M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

Thomas Gerald Gready, Jr., A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

Alice B. Campbell, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

Lucia J. Dunham, A.B., M.D., Research Assistant in Obstetrics and Gynecology, National Advisory Cancer Council Grant.

Lewis Lockwood Hall, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

Joseph Bolivar DeLee, A.M., M.D., Professor Emeritus of Obstetrics and Gynecology.

INTRODUCTORY

The Department of Obstetrics and Gynecology represents a unified department. Laboratory and office facilities for the Department are provided in the University's section of the new Chicago Lying-in Hospital and Dispensary in affiliation with the University of Chicago. The Hospital, which is adjacent to the other units of the University Clinics, contains clinical facilities for obstetrics, including an adult bed capacity of 162 and an out-patient department—a unit of the Max Epstein Clinic. All the facilities of this hospital and its dispensary, as well as all the facilities of the University Clinics, are available to the Department of Obstetrics and Gynecology.

Home-delivery service is conducted from headquarters in this hospital. Until a special gynecological pavilion is erected, part of the work of the Department will be conducted in the Albert Merritt Billings Hospital, which is located across the street from the Chicago Lying-in Hospital.

PLAN OF INSTRUCTION

Obstetrics and gynecology are taught as a single subject, with emphasis on the close relationship of pregnancy, parturition, and the puerperium to disorders and diseases related to the generative organs of the human female. Clinical instruction and practical work are separated of necessity, but students receive instruction in both with at least 65 per cent stress on obstetrics, covering antepartum, intrapartum, and postpartum care. The general plan consists of introductory lectures, externships in the hospital and out-patient clinics, the opportunity to observe operations, normal and abnormal labors, and the opportunity to participate in the delivery of patients.

Special courses and the opportunity for investigative work are offered to those who are properly qualified to participate.

HIGHER DEGREES

Candidates for higher degrees must be acceptable to the Department and conform to the general requirements of the Division of the Biological Sciences for these degrees. A higher degree is not recommended in Obstetrics and Gynecology until the candidate has proved his fitness to develop as a specialist in these branches.

A thesis is required which compares in magnitude with those usually required for such degrees in other branches.

THE DEGREE OF DOCTOR OF MEDICINE

In addition to the general requirements, all candidates for the degree of Doctor of Medicine are advised to complete a minimum of 3 courses in obstetrics and gynecology, of which at least a half-course must be devoted to participation in the care of confinement cases. Written and oral examinations must be satisfactorily completed.

Candidates for the M.D. degree *with honors* in Obstetrics and Gynecology must present a thesis which is acceptable to the Department and do work of a high order.

INTERNSHIPS AND RESIDENCES

Internships are available, especially in obstetrics, and applications for these internships must be filed early.

Two residencies are available each year.

FELLOWSHIPS

Fellowships under the Douglas Smith and the Kuppenheimer foundations may be awarded to properly qualified candidates for research work in the Department of Obstetrics and Gynecology. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded on recommendation of the Chairman of the Department, to whom application for further information should be made.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Conjoint Clinical Course 301. Introductory Course.—See page 31.

Conjoint Clinical Course 302.—See page 31.

303. Externship Chicago Lying-in Hospital.—A course in which students share and thus receive practical instruction in the care and study of patients. This course includes Conjoint Clinical Course 302. Recommended in Junior year. Offered each quarter. Limited to 8 students. Prerequisite: Conjoint Clinical Course 301. 1½Cs.–3Cs. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER, AND STAFF.

304. Externship Chicago Lying-in Hospital Out-Patient Clinic.—A course given in the Max Epstein Clinic. This course includes Conjoint Clinical Course 350. Offered daily, every morning or every afternoon, each quarter. Prerequisite: Obstetrics and Gynecology 303. ½C.–3Cs. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER, AND STAFF.

305. Practical Course Chicago Lying-in Hospital.—Study and observation of cases in birthrooms without participation in the conduct of labor. Offered each quarter. Two full weeks. Living quarters in the hospital furnished at a small charge. Reservations should be made well in advance. Limited to 2 students at a time. Prerequisite: Obstetrics and Gynecology 303. ½C. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER, AND STAFF.

306. Practical Course Chicago Lying-in Hospital Home-Delivery Service Department.—Supervised observation and management of cases in the home during pregnancy, parturition, and the puerperium. Offered each quarter. Two full weeks. Living quarters in the hospital furnished at a small charge. Reservations should be made well in advance. The course may also be taken at the Chicago Maternity Center. Limited to 2 students at a time. Prerequisite: Obstetrics and Gynecology 303. ½C. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER, AND STAFF.

308. Special Pathology in Obstetrics and Gynecology.—A course for those especially interested in the field of gross and microscopic pathology. Offered once weekly in the Spring and Autumn quarters. Limited to 15 students. Prerequisite: Obstetrics and Gynecology 303. ½C. DAVIS, POTTER.

309. Pathology of the Fetus and Newly Born Infant.—A discussion of the pathologic conditions affecting the fetus before delivery and the infant in the first few days of life. The anatomy and physiology of the fetus and the newborn are briefly reviewed. Prerequisite: Obstetrics and Gynecology 303. ½C. Winter, F., 1:30–4:30, ADAIR, POTTER.

Conjoint Clinical Course 350.—See page 31.

351. Advanced Work in Obstetrics and Gynecology.—Special courses in clinical, laboratory, and experimental work may be arranged during any quarter. Prerequisite: 3 courses in Obstetrics and Gynecology. Credit as arranged. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER.

401. Research in Obstetrics and Gynecology.—A course open to qualified students by arrangement. Prerequisite: 3 courses in Obstetrics and Gynecology. Credit as arranged. ADAIR, DIECKMANN, DAVIS, HESSELTINE, SNYDER.

411. Seminar.—Open to graduate and undergraduate students. No credit. W., 8:00–9:00, ADAIR.

THE DEPARTMENT OF PATHOLOGY

OFFICERS OF INSTRUCTION

Harry Gideon Wells, Chairman of the Department; Director of the Otho S. A. Sprague Memorial Institute.

Harry Gideon Wells, Ph.D., M.D., Professor of Pathology.
Paul Roberts Cannon, Ph.D., M.D., Professor of Pathology.
Maud Slye, A.B., Sc.D., Associate Professor of Pathology.
Harriet F. Holmes, A.B., Research Associate in Pathology.
Julian Herman Lewis, Ph.D., M.D., Associate Professor of Pathology, Otho S. A. Sprague Memorial Institute.
Siegfried Maurer, S.B., M.D., Research Associate in Pathology.
Edwin F. Hirsch, Ph.D., M.D., Research Associate in Pathology.
Eleanor Mary Humphreys, A.B., M.D., Assistant Professor of Pathology.
Paul Eby Steiner, M.D., Ph.D., Assistant Professor of Pathology.
Mercy Aurora Southwick, M.D., Curator and Instructor in Pathological Technique.
Harold Oliver Wiles, Ph.D., Instructor in Chemistry; Armour Fellow.
Edith Farrar, A.B., Assistant in Pathology.
Curtis McCay Flory, S.B., M.D., Assistant in Pathology.
Howard Carl Hopps, S.B., M.D., Assistant in Pathology.
Richard Phillips Morris, M.D., Assistant in Pathology.
Clarence Chancelum Lushbaugh, S.B., Assistant in Pathology.
Charles Emmett Marshall, S.B., Research Assistant in Pathology, Douglas Smith Foundation.
William A. Meissner, M.D., Assistant and Resident in Pathology.

Ludvig Hektoen, M.D., Sc.D., LL.D., Professor Emeritus of Pathology; Director of the John McCormick Institute for Infectious Diseases.

FELLOW, 1939–40

Clarence Chancelum Lushbaugh, S.B.

INTRODUCTORY

The courses offered in the University by the Department include the required work in pathology in the curriculum of the study of medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and those wishing to qualify themselves for research.

HIGHER DEGREES

The Divisional requirements for higher degrees are outlined on pages 72–74, *Announcements of the College and the Divisions.*

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental prerequisites: a dissertation and 8 courses of work for a higher degree in pathology are required, if all the work is in pathology. Substitution of courses in bacteriology and immunity may be made with the approval

of the Chairman of the Department, but Pathology 301, 302, 303, and at least 3 courses of research must be taken in the Department of Pathology.

The Divisional degree.—The Divisional degree is not awarded by the Department of Pathology.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Courses required of all candidates are Pathology 301, 302, and 303, Bacteriology 202, and a course covering the fundamental principles and methods of immunology. Courses in bacteriology and parasitology may be accepted as equivalent to courses in pathology to a maximum of 5 courses with the approval of the Chairman of the Department. A dissertation must be presented containing the results of original research, prepared under the direction of an officer of the Department but so conducted as to indicate the ability of the candidate to conduct independent original investigation.

THE DEGREE OF DOCTOR OF MEDICINE

The minimum course requirement for the degree of Doctor of Medicine in the Department of Pathology is as listed in the table on page 17.

The student must pass a general departmental examination in pathology. This is given on the completion of Conjoint Clinical Course 302, and its scope corresponds to the field covered by Pathology 301, 302, and the part of Conjoint Clinical Course 302 which is devoted to pathology. The examination would thus be taken ordinarily at the end of the third year of medical work.

Students who elect to become candidates for the degree of Doctor of Medicine *with honors* in the Department of Pathology must have (1) maintained a better than average grade for the four years of the medical curriculum and (2) done advanced work, in excess of the minimum requirements as stated above during at least three quarters, leading to the preparation of a dissertation acceptable to the Department of Pathology, and constituting an actual contribution to knowledge.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

Pathology 301 and 302 will be given as a double course in the Summer of 1940. M.–F., 8:00–11:00, CANNON, HUMPHREYS, STEINER, AND ASSISTANTS.

***301. General Pathology and Pathological Histology.**—A practical laboratory course in general pathological histology, supplemented by the study of gross specimens, attendance at necropsies, and by recitations in general pathology. Prerequisite: Histology, Bacteriology 202, physiology, biochemistry, and visceral anatomy. Laboratory, recitations, and lectures: 8 hours a week. Autumn, M.–Th., 9:00–11:00, CANNON, HUMPHREYS, STEINER, AND ASSISTANTS.

***302. Pathology of Infectious Granulomas and Tumors.**—Winter, M., W., 9:00–12:00; Tu., 9:00–11:00; HUMPHREYS, STEINER, AND ASSISTANTS.

303. Advanced Pathology.—A course open to a limited number of students who have credit in general pathology. Laboratory work in pathological technique, and the study and recording of necropsies. Summer, Autumn: laboratory, M., 1:00–5:00; Winter, Spring: laboratory, W., 1:00–5:00. Summer, Autumn, Spring: lecture, Tu., F., 11:00–12:00, or hours to be arranged; Winter: Tu., 2:30; S., 9:00. WELLS, SOUTHWICK, CANNON.

***305. Defensive Mechanisms of the Body.**—A conference and laboratory course on methods employed by the body in defense against disease. Prerequisite: General bac-

teriology. Spring: lecture, M., 2:30; Th., 9:00; laboratory, M., 3:30–5:30; Tu., 9:00–11:00; Th., 10:00–11:00; CANNON.

***401. Research in Pathology.**—A course open to a limited number of qualified students and graduates in medicine. Hours to be arranged for each student. Each quarter, WELLS, CANNON, HUMPHREYS, STEINER.

Conjoint Clinical Course 302.—For Juniors in pathology. Summer, Autumn, Spring, Tu., Th., 4:30–5:30, WELLS, CANNON, HUMPHREYS, STEINER; Winter, BUCY, WALKER, POTTER.

Joint conferences of clinical departments with the Department of Pathology on correlation of clinical studies with necropsy findings are held on Friday at 4:30. No credit.

THE DEPARTMENT OF PEDIATRICS

OFFICERS OF INSTRUCTION

Frederic W. Schlutz, Chairman of the Department of Pediatrics.

Frederic W. Schlutz, S.M., M.D., Richard T. Crane Professor of Pediatrics.
Joseph G. Brennemann, Ph.B., M.D., Clinical Professor of Pediatrics.
Archibald Hoyne, S.B., M.D., Clinical Professor of Pediatrics.
Katsuji Kato, M.D., Ph.D., Assistant Professor of Pediatrics.
Douglas N. Buchanan, A.M., Sc.B., M.B., Ch.B., Assistant Professor of Pediatrics.
Arthur Ray Turner, A.B., M.D., Assistant Professor of Pediatrics.
Parker Dooley, S.B., M.D., Assistant Professor of Pediatrics.
Francis Howell Wright, M.D., Assistant Professor of Pediatrics.
Daniel J. Pachman, A.B., M.D., Instructor in Pediatrics.
Minerva Morse, Ph.D., Research Associate in Pediatrics, Douglas Smith Foundation.
Donald Ernest Cessels, A.B., S.B., M.D., Instructor in Pediatrics.
Helmut P. G. Seckel, M.D., Research Associate in Pediatrics, Douglas Smith Foundation.
Elizabeth May Knott, Ph.D., Research Associate in Pediatrics.
Helen Gertrude Oldham, Ph.D., Research Associate in Pediatrics.
Guido Joseph Sartor, A.B., M.D., Instructor and Resident in Pediatrics.
Pei-Kuang Li, M.B., M.D., Research Assistant and Benjamin J. Rosenthal Memorial Research Fellow,.
Charles E. Anderson, Jr., A.B., M.D., Assistant and Assistant Resident in Pediatrics.
Thomas C. Hurst, S.B., M.D., Assistant and Assistant Resident in Pediatrics.
Nathan Weil, Jr., M.D., Assistant and Assistant Resident in Pediatrics.

INTRODUCTORY

The Department of Pediatrics as now organized represents the fields of general pediatrics, preventive pediatrics, and contagious diseases. Instruction in all these fields will be offered during the academic year 1940–41.

The Department is located in the Bobs Roberts Memorial Hospital for Children, which houses the in-patient and out-patient services of the Pediatric Clinic, the preventive pediatric welfare stations, and all the research laboratories and facilities available to the Department for scientific investigations in these fields.

The pediatric material of the in- and out-patient services of the Provident Hospital, the Children's Memorial Hospital, and the Country Home for Convalescent Crippled Children is, to some extent, available to the Department as teaching material.

The entire newly born service of the Department of Obstetrics has, by consent of that staff, been placed in charge of the Pediatric Department and is cared for at the Lying-in Hospital by the Pediatric Staff.

Instruction in contagious diseases is at present given in the Municipal Contagious Disease Hospital, supplemented by didactic lectures in Conjoint Clinical Course 350.

RESEARCH

Properly qualified students are offered every opportunity for research work, and a limited number of residencies and assistant residencies are available in the Department. Applicants for the residencies must have the degree of Doctor of Medicine and have had at least one year of pediatric internship.

FELLOWSHIPS

Some fellowships for research in pediatrics are open to suitably qualified students. They provide a stipend and the expense of the research and are open only to graduate students with, or without, the degree of Doctor of Medicine. The applicant must be recommended by the Chairman of the Department.

DEGREES

THE DEGREES OF MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY

Properly qualified candidates may be eligible for the higher degrees of Master of Science and Doctor of Philosophy.

The degrees of Master of Science and Doctor of Philosophy are recommended only for students who have (1) submitted a thesis embodying original research in the field of pediatrics, approved by the Department of Pediatrics, (2) completed satisfactorily an amount of advanced work equivalent to that required for the degree of Master of Science or of Doctor of Philosophy, as required by the Division of the Biological Sciences, and (3) fulfilled the other Divisional requirements as stated on pages 72–74, *Announcements of the College and the Divisions.*

The Divisional Master's degree is not given in the Department.

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of 1½ courses in pediatrics. In addition a half-course must be taken in contagious diseases, which is given conjointly with the Department of Medicine. Written, practical, and oral examinations must be satisfactorily completed. Candidates for the degree of Doctor of Medicine *with honors* in Pediatrics must have completed a productive piece of research, in addition to having maintained a better than average grade for the four years of the medical curriculum.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Conjoint Clinical Course 301. Introductory Course.—See page 31.

Conjoint Clinical Course 302.—See page 31.

Conjoint Clinical Course 350.—See page 31.

303. Pediatric Externship.—Students are assigned to hospital service and out-patient department for 3 weeks each. Limited to 8 students. This course includes work in Pediatrics 352. Prerequisite: Conjoint 301 or equivalent, Pathology 302. 1½Cs. each quarter. Daily, 9:00–4:30, SCHLUTZ, DOOLEY, AND STAFF.

304. Senior Externship.—General pediatrics and therapeutic procedures. Limited to 6 students. It is recommended that students take at least 1 course in this work. Prerequisite: Conjoint 301 or equivalent, Pathology 302, Pediatrics 303. 2 half-days week-

ly, ½C.; 4 half-days weekly, C.; 6 half-days weekly, 1½Cs. Each quarter, daily, 9:00–12:00, DOOLEY AND STAFF.

305. Contagious Diseases.—Instruction given at the Municipal Contagious Disease Hospital in the diagnosis and treatment of all types of contagious disorders. Limited to 7 students.* ½C. Autumn, Winter, Spring, Tu., Th., 4:00–6:00, HOYNE. Supplementary lectures by DR. DICK and DR. SCHLUTZ are included in Conjoint Clinical Course 350.

306. Pediatric Psychiatry, Fourth Year.—Limited to 12 students. ¼C. Autumn, Winter, Spring, 1 period weekly, hours to be arranged, ———.

310. Pediatric-Roentgenology Conference.—Third- and fourth-year students. No credit. Autumn, Winter, Spring, W., 5:30, PEDIATRICS AND ROENTGENOLOGY STAFFS.

320. Clinical Conference.—Third- and fourth-year students. No credit. Each quarter. M., 3:00, PEDIATRIC STAFF.

352. Preventive Pediatrics (Welfare Clinic).—Practical instruction in care and feeding of normal infants with demonstration of food preparation. Fourth year. Limited to 10 students. ½C. Each quarter, Tu., Th., 2:00–4:30, DOOLEY AND STAFF.

353. Pediatric Hematology.—Demonstration of the blood and of leucopoietic response in infancy and childhood, with special emphasis on the diagnosis and treatment of anemias and leukemias. Included in pediatric externship, but open to any student in the biological sciences. ¼C. each quarter. Tu., F., 8:00, KATO.

402. Research and Advanced Work in Pediatrics.—Open to qualified students by arrangement with the Chairman of the Department. C.–3Cs. Hours to be arranged, SCHLUTZ, DOOLEY, AND STAFF.

Weekly conferences are held with the Department of Pathology and the clinical departments on correlation of clinical study of cases with morbid anatomy. Open to students on invitation only. No credit. F., 4:30, each quarter.

* Vaccination against scarlet fever and diphtheria is required in advance.

THE DEPARTMENT OF PHARMACOLOGY

OFFICERS OF INSTRUCTION

EUGENE MAXIMILIAN KARL GEILING, Chairman of the Department of Pharmacology.

EUGENE MAXIMILIAN KARL GEILING, PH.D., M.D., Professor of Pharmacology.
CLARENCE WEINERT MUEHLBERGER, PH.D., Associate Professor of Toxicology.
JULIUS MOSHER COON, PH.D., Instructor in Pharmacology.
DELBERT A. GREENWOOD, S.M., Research Associate in Pharmacology.
F. ELLIS KELSEY, M.D., Research Associate in Pharmacology, Otho S. A. Sprague Memorial Institute.
GERALD FOSTVEDT, PH.D., Research Assistant in Pharmacology.
FRANCES KATHLEEN OLDHAM, PH.D., Assistant in Pharmacology.
ROBERT T. STORMONT, PH.D., Research Assistant in Pharmacology, Otho S. A. Sprague Memorial Institute.
JULES HILBERT LAST, S.B., Research Assistant in Pharmacology.
GRAHAM MION CHEN, SC.D., Research Assistant in Pharmacology.
PRISCILLA CHINN FOURT, PH.D., Research Assistant in Pharmacology.
EARL HAMILTON DEARBORN, A.B., Research Assistant in Pharmacology.

FELLOW, 1939–40

ROBERT BLACKWELL SMITH, JR., S.M.

INTRODUCTORY

The Department offers courses in pharmacology and toxicology to: (1) medical students, (2) graduate students in the physical and biological sciences, and (3) properly qualified students who wish to pursue advanced work in preparation for either a research or an academic career in this field.

Students who desire to specialize in this Department are strongly advised to obtain a broad scientific foundation, including work in the cognate sciences. The following courses are suggested as aids to the attainment of this objective: Physics 105, 106, and 107; Mathematics, including calculus; Chemistry 104, 105, 120, 130, 240, 261; Physiology 202, 203, 304; Biochemistry 201, 202; Zoölogy 101; Botany, 101, 202; comparative anatomy of vertebrates; histology; bacteriology; and pathology. It is advisable that the student have a reading knowledge of French and German.

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department arranges with the aid of the Departmental Counselor a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the College.

HIGHER DEGREES

The Divisional requirements for higher degrees are outlined on pages 72–74, *Announcements of the College and the Divisions*.

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental prerequisites: Admission to the Division, a satisfactory dissertation, and three quarters of advanced work in the Department and related departments are required, together with a working knowledge of German and French and a final Departmental examination.

The Divisional degree.—The Divisional degree will be given in only rare cases, and in such instances the Divisional requirements (p. 73, *Announcements of the College and the Divisions*) will be followed.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—(1) A comprehensive knowledge of the history and literature of pharmacology and toxicology; (2) a satisfactory knowledge of physiology, biochemistry, histology, and pathology, or preferably the completion of the first two years of Medicine; and (3) the completion of original research work. Candidates must take part in the seminars. Before he is accepted as a candidate, the student is required to pass a preliminary examination, the scope of which is covered by Chemistry 120, 221, 230, 240, 261; Biochemistry 201, 202; Physiology 251, 252, 303; and Pharmacology 201, 301, 310, 352, 401. This preliminary examination should be taken as early as possible and may not be taken later than eight months before the degree is to be conferred.

THE DEGREE OF DOCTOR OF MEDICINE

The requirements for the degree of Doctor of Medicine are listed in the table on pages 17–18. They include Course 301 and a satisfactory final examination.

Candidates for the degree of Doctor of Medicine *with honors* in Pharmacology must have (1) maintained a better than average grade for the four years of the medical curriculum, and (2) done advanced work in excess of the above-stated minimum requirements during at least three quarters, leading to the preparation of an acceptable thesis based on independent research approved by the Department of Pharmacology. It is expected that the candidate will attend the Departmental seminars.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

***201. Toxicology.**—A lecture and laboratory course in which important organic and inorganic poisons are discussed. The laboratory exercises comprise a study of the methods used in detecting the commoner poisons and the lesions produced by them. The contents of the course are contained in a lecture outline obtainable at the University Bookstore. Students intending to take Pharmacology 301 are expected to be familiar with the contents of Pharmacology 201. Prerequisite: Biochemistry 201. A knowledge of histology and pathology is desirable. ½C.–C. Winter: lecture, M., W., 1:30; laboratory, M., 2:30–5:30; Geiling, Muehlberger, and Staff.

***301. Pharmacology.**—The physiological analysis and interpretation of the mode of action of the more important drugs. Attention will be paid to prescription-writing and to the preparations listed in the *U.S. Pharmacopoeia*, the *National Formulary*, and *News and Nonofficial Remedies*. Prerequisite: Students registering for this course are expected to be familiar with the contents of Pharmacology 201. In addition to Biochemistry 201, 202, Physiology 251, 252, and 303, which are required, a knowledge of histology and pathology is desirable. C. Winter: lecture, M.–Th., 9:00; laboratory, *sec. a*, Th., *sec. b*, F., 1:30–5:00; Spring: lecture, M.–Th., 8:00; laboratory, *sec. a*, Th., *sec. b*, F., 1:30–5:30; Geiling, Pfeiffer, Coon.

310. Forensic Medicine (offered with the co-operation of the departments of Pathology and Medicine).—An introductory course in forensic phases of medical practice. Pathology of traumatic injuries and other causes of unexpected death will be discussed; also forensic aspects of psychiatry, poisonings, and related medicolegal problems. Prerequisite: General Pathology 301 and Pharmacology 301, or consent of Department. ½C. Spring, 2 lectures weekly, WELLS, SLIGHT, MUEHLBERGER.

***352. Advanced Pharmacology and Toxicology.**—Conferences and advanced laboratory work on selected topics, such as bio-assay, and other quantitative pharmacological and toxicological methods. Open to a limited number of qualified students. Prerequisite: Pharmacology 301. C.–2Cs. Autumn, Winter, Spring, GEILING, PFEIFFER, COON.

***401. Research in Pharmacology.**—A course open to a limited number of qualified students and graduates in medicine. Each quarter, hours to be arranged for each student, GEILING, PFEIFFER, COON.

410. Seminar in Pharmacology.—A joint seminar with the departments of Physiology and Biochemistry for the presentation of research reports. One hour weekly, each quarter, STAFF MEMBERS.

THE DEPARTMENT OF PHYSIOLOGY

OFFICERS OF INSTRUCTION

ANTON JULIUS CARLSON, Chairman of the Department of Physiology.
NATHANIEL KLEITMAN, Secretary of the Department.

ANTON JULIUS CARLSON, PH.D., M.D., LL.D., Frank P. Hixon Distinguished Service Professor of Physiology.
RALPH STAYNER LILLIE, PH.D., Professor of Physiology.
ARNO BENEDICT LUCKHARDT, PH.D., M.D., SC.D., Professor of Physiology.
FRANKLIN CHAMBERS MCLEAN, PH.D., M.D., Professor of Pathological Physiology.
NATHANIEL KLEITMAN, PH.D., Associate Professor of Physiology.
RALPH WALDO GERARD, PH.D., M.D., Associate Professor of Physiology.
VICTOR E. JOHNSON, PH.D., M.D., Associate Professor of Physiology; Student Counselor.
HEINRICH NECHELES, M.D., PH.D., Assistant Professor of Physiology.
LOUIS NELSON KATZ, A.M., M.D., Assistant Professor of Physiology.
SAMUEL SOSKIN, M.D., PH.D., Assistant Professor of Physiology.
PAUL ANDREW NICOLL, PH.D., Instructor in Physiology.
F. JOSEPH MULLIN, PH.D., Instructor in Physiology.
HOWARD G. SWANN, PH.D., Research Associate in Physiology, Seymour Coman Fund.
EDWARD E. EAGLE, S.M., Research Assistant in Physiology.
RUBIN J. SCHACHTER, S.B., Research Assistant in Physiology.
MORRIS ABRAHAM LIPTON, PH.D., Research Assistant in Physiology.
L. WILLARD FREEMAN, A.B., Assistant in Physiology.
JONAS ELYU SCHREIDER, S.M., Assistant in Physiology.
ELBERT TOKAJI, S.M., Assistant in Physiology.
DANIEL H. CAHOON, A.B., Assistant in Physiology.
ALENE E. FREUDENHEIM, A.B., Assistant in Physiology.
JUDITH ETHEL GRAHAM, S.B., Assistant in Physiology.
BERNARD D. ROSS, S.B., Assistant in Physiology.
EDWIN LEE SMITH, S.M., Assistant in Physiology.

FELLOWS, 1939–40

EDWIN L. SMITH, S.M. ROBERT H. SHULER, S.M.

MATHEMATICAL BIOPHYSICS

NICOLAS RASHEVSKY, PH.D., Associate Professor of Mathematical Biophysics.
ALSTON SCOTT HOUSEHOLDER, PH.D., Research Associate in Mathematical Biophysics.
HERBERT D. LANDAHL, S.M., Research Assistant in Mathematical Biophysics.
ALVIN MARTIN WEINBERG, PH.D., Research Assistant in Mathematical Biophysics.
GAYLORD J. YOUNG, S.M., Research Assistant in Mathematical Biophysics.

INTRODUCTORY

The courses in the Department of Physiology are arranged for four classes of students:

1. Students in the College and Divisions who desire some knowledge of human physiology, foods, and personal hygiene as an educational equipment for life.

2. Students in the Divisions who wish to acquire a more extensive knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a two-course sequence is given: Physiology 202 and 203.

3. Students wishing to specialize in physiology, or students of other biological sciences who wish to take minor work in advanced physiology.

4. Medical students.

ADMISSION TO THE DEPARTMENT

Students are admitted to the Department who have previous training in general inorganic and elementary organic chemistry (Chemistry 104, 105, 120, or equivalents), and who also satisfy the general requirements for admission to the Division.

THE PREPARATION OF TEACHERS

Students who are preparing to teach physiology in secondary schools or junior colleges should refer to the general statements on pages 76–78 of the *Announcements of the College and the Divisions*, secure a copy of the *Announcements* entitled *The Preparation of Teachers*, and consult the Counselor, Associate Professor Johnson.

THE BACHELOR'S DEGREE

On admission to the Division, each student specializing in the Department arranges in consultation with the Departmental Counselor a progressive, sequential program of approximately 12 courses in the Department or in the Department and related departments, in addition to those completed in the College.

The required courses in the Department are Physiology 101 or 202 and 203, 251, 252, and 303. With the approval of the Counselor, courses may be selected from the following: Physics 105, 106, 107; Psychology 201; Chemistry 240, 261; Biochemistry 201, 202; Anatomy 306 or 316; Zoölogy 205, 220, 301, 320; Bacteriology 201.

HIGHER DEGREES

The Divisional requirements for higher degrees are set forth on pages 72–74 of the *Announcements of the College and the Divisions*.

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental prerequisites: (1) Research, at least 3 courses (Physiology 411); (2) 2–5 courses from the courses numbered 300 or higher in physiology and related sciences (Physiology 251, 252, and 303 may be counted in these 5 courses); and (3) thesis.

The Divisional degree.—Departmental prerequisites: A scholastic achievement in physiology equivalent to Courses 251, 252, and 303. For general requirements see Divisional announcement concerning this degree (p. 73).

THE DEGREE OF DOCTOR OF PHILOSOPHY

Departmental prerequisites.—Physiology 251, 252, and 303, and Biochemistry 201 and 202, or their equivalent, and 2–4 additional courses in the 300–400 group in physiology and biochemistry are required of all candidates for the Doctor's degree. The candidate must also participate in the weekly seminar in the Physiology group. The further

selection of work is arranged in each case by consultation. The student must pass a qualifying examination in the general field of physiology before the Departmental recommendation for the candidacy is granted.

THE DEGREE OF DOCTOR OF MEDICINE

The course requirements in Physiology for the degree of Doctor of Medicine are listed in the table on pages 17–18. They include Courses 251, 252, and 303.

A candidate for the degree of Doctor of Medicine who elects to do research leading to a thesis in the Department of Physiology is guided in the selection and experimental development of his research problem.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

COURSE IN THE COLLEGE

*101. **Physiology.**—See page 54, *Announcements of the College and the Divisions.*

COURSES IN THE DIVISION

Physiology 202 and 203 are intended for students who wish to secure a more detailed and comprehensive knowledge of physiology. These courses prepare the student for advanced work in physiology and are useful to students who intend to specialize in other branches of biology. Physiology 202 is particularly helpful to students in home economics.

*202. **Physiology of Circulation, Respiration, Digestion, Metabolism, and Nutrition.**—Prerequisite: Elementary physics and chemistry. Summer: lecture, Tu., W., Th., 1:30; laboratory, M., F., 1:30–3:30; JOHNSON; Autumn: lecture, M., W., Th., 1:30; laboratory, M., Th., 2:30–4:30; KLEITMAN AND ASSISTANT.

*203. **Physiology of Muscle, Nervous System, Special Senses, Internal Secretions, and Reproduction.**—Prerequisite: Elementary physics and chemistry. Winter: lecture, M., W., Th., 1:30; laboratory, M., W., 2:30–4:30; KLEITMAN AND ASSISTANT.

*205. **Undergraduate Honors Course in Physiology.**—An introduction to research Prerequisite: Physiology 202, 203, or their equivalent, and consent of instructor. Each quarter, hours to be arranged, JOHNSON.

*251. **Physiology of Blood, Circulation, and Respiration.**—Lectures and recitations, 4 hours a week; laboratory work, 4 hours a week. Prerequisite: Physiology 202 or equivalent. Spring: lecture, M.–Th., 8:00; laboratory, *sec. a*, F., 8:00–12:00; *sec. b*, F., 1:30–5:30; MCLEAN, JOHNSON, AND ASSISTANTS.

*252. **Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscles, and Heat.**—Lectures and recitations, 4 hours a week; laboratory, 4 hours a week. Prerequisite: Biochemistry 201, Physiology 251. Summer: lecture, Tu.–Th., 11:00; laboratory, M., 8:00–12:00; conferences, to be arranged; LUCKHARDT, KLEITMAN; Autumn: lecture, M.–Th., 8:00; laboratory, *sec. a*, F., 8:00–12:00; *sec. b*, F., 1:30–5:30; LUCKHARDT AND ASSISTANTS.

*303. **Physiology of the Nervous System and the Senses.**—Lectures, 2 a week; recitation and conference, 1 a week; laboratory, 4 hours a week. Prerequisite: Anatomy 306 and Physiology 251. Summer: lecture, Tu.–Th., 11:00; laboratory, M., 1:30–5:30; Winter: lecture, M.–Th., 8:00; laboratory, *sec. a*, F., 8:00–12:00; *sec. b*, F., 1:00–5:00; GERARD, JOHNSON, AND ASSISTANTS.

*304. **Special Physiology of Mammals.**—A course including the experiments not given in the general courses. Prerequisite: Physiology 251, 252, or 303, or their equivalent. ½C. Winter, W., 1:30–5:30, LUCKHARDT.

*305. **The Principles of Physiology.**—The application of the principles of physiology to the clinical examination of the central nervous system and special senses. Laboratory work limited to 10 students; registration for laboratory by conference with instructor. ½C.–C. Spring, hours to be arranged, LUCKHARDT.

306. **Mineral Metabolism.**—The dynamics of the behavior of electrolytes and of water in the animal organism in health and in disease. Lectures and conferences, 2 hours a week. Prerequisite: Biochemistry 202, Physiology 252. ½C. Autumn, Tu., W., 3:30, MCLEAN.

308. **Applied Physiology of the Circulation.**—Mechanics of the circulation; the electrocardiogram; sphygmography; sphygmomanometry; pathological physiology of the heart and blood vessels. One phase of the subject considered each quarter. Lectures and conferences, 2 hours a week. Prerequisite: Physiology 251. ½C. Autumn, Winter: lecture, Th., F., 4:30, KATZ.

309. **Pathological Physiology of the Gastrointestinal Tract.**—Lectures and conferences, 2 hours a week. Prerequisite: Physiology 252. ½C. Spring, M., 3:30, Th., 9:00, NECHELES.

310. **Intermediary Metabolism in Health and Disease.**—Lectures and conferences, 2 hours a week. Prerequisite: Physiology 252. ½C. Winter, Tu., W., 4:30, SOSKIN.

312. **Physiology of the Nervous System, Chronaxie, Conditioned Reflexes, Sleep.**—½C.–C. Autumn, Tu., W., 4:30, KLEITMAN.

*403, 404. **General Physiology.**—Properties and physicochemical constitution of living matter; influence of chemical and physical agents on protoplasm; nature and conditions of protoplasmic response. Prerequisite: Inorganic and organic chemistry, general physics, general zoölogy or botany, introductory physiology. 3Cs. Autumn, Winter: lecture, Th., F., 1:00–2:30; laboratory, Th., F., 2:30–5:30, S., 9:00–12:00; ———.

406. **The Neurone.**—The properties of the nerve cell and fiber in relation to neural function in the organism. Registration by consent of instructor. ½C. Spring, hours to be arranged, GERARD.

407. **Special Physiology of the Glands of Internal Secretion.**—Summer: lecture, 11:00, SWANN; Winter: lecture, 2:30, LUCKHARDT, SWANN.

*408. **Special Physiology of the Glands of Internal Secretion.**—Laboratory, hours to be arranged. Limited to 10 students. Prerequisite: Physiology 407 and consent of instructor. Autumn, Spring, SWANN.

409. **Seminar in Physiology Group.**—No credit. Summer, First Term, M., 4:30.

*411. **Research in Physiology.**—C.–3Cs. each quarter. Hours to be arranged, LUCKHARDT, MCLEAN, KLEITMAN, GERARD, JOHNSON, SWANN, NICOLL, MULLIN.

MATHEMATICAL BIOPHYSICS

The degree of Doctor of Philosophy in Mathematical Biophysics is given through the Faculty of the Division of the Biological Sciences. The program of study is made in consultation with the Chairman of the Committee on Mathematical Biophysics and the Chairman of the Department of Physiology.

COURSES OF INSTRUCTION

255. **Introduction to Mathematical Biophysics.**—A general course in the development of biophysical theories serving as an introduction to current research. Prerequisite: Calculus, elementary physics. Some knowledge of general biology desirable. ½C. Summer, W., F., 3:30, HOUSEHOLDER.

347. **Mathematical Biophysics I.**—Physicomathematical aspects of cell growth and multiplication. Physicomathematical theory of organic form. Prerequisite: General

physics, calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Autumn, W., F., 3:30, RASHEVSKY, HOUSEHOLDER.

348. Mathematical Biophysics II.—Physicomathematical aspects of nerve excitation and nerve conduction. Prerequisite: General physics, calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Winter, W., F., 3:30, RASHEVSKY, HOUSEHOLDER.

349. Mathematical Biophysics III.—Hysteresis phenomena in physics and biology. Application to learning. Physicomathematical aspects of the functions of the central nervous system and of behavior. Physicomathematical aspects of the *Gestalt* problem. Applications to the mathematical theory of aesthetic values and of social phenomena. Prerequisite: General physics, calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Spring, W., F., 3:30, RASHEVSKY, HOUSEHOLDER.

370. Seminar in Mathematical Biophysics.—A critical and comparative survey of physical and mathematical theories in the field of biology and reports on current research. Prerequisite: Consent of instructor. ½C. Autumn, Winter, Spring, F., 4:30, RASHEVSKY, HOUSEHOLDER.

420. Research in Mathematical Biophysics.—Each quarter. RASHEVSKY, HOUSEHOLDER.

THE DEPARTMENT OF PSYCHOLOGY

For announcements of courses in psychology see the *Announcements of the College and the Divisions*, the Division of the Social Sciences.

Students who have already begun their work in candidacy for a degree in the Division of the Biological Sciences may continue in accordance with the program previously approved for the individual student.

Students may be admitted to the Division of the Biological Sciences with the expectation of taking a degree of Bachelor of Science or Divisional Master of Science in Psychology, if they have completed the requirements for admission and are individually recommended by the Department of Psychology.

THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE

PSYCHIATRIC RESEARCH

The Otho S. A. Sprague Memorial Institute supports research in psychiatry, conducted on a co-operative basis in several departments of the University in association with the division of psychiatry of the Department of Medicine. The close geographic and working association of medical and fundamental sciences gives exceptional advantages for the study of psychiatric problems, which ramify so widely into many special fields. The scope of the present activities is indicated by the different departments represented by the staff members as listed below. It is hoped that co-operation will also be established with other disciplines such as sociology, education, and law, in regard to research problems of mutual interest to these fields and to psychiatry.

The Otho S. A. Sprague Memorial Institute Fund is administered through the Dean of the Division of the Biological Sciences, with the aid of the following advisory committee:

William Hay Taliaferro, Dean of the Division of Biological Sciences, Chairman.
Arthur Charles Bachmeyer, Director of University Clinics; Associate Dean of the Division of Biological Sciences.
David Slight, Professor of Psychiatry.
H. Gideon Wells, Professor and Chairman of the Department of Pathology; Director of the Otho S. A. Sprague Memorial Institute.

MEMBERS OF THE STAFF OF THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE

H. Gideon Wells, M.D., Ph.D., Director of Medical Research of the Otho S. A. Sprague Memorial Institute.

IN THE DEPARTMENT OF ANATOMY

David Barrett Clark, Ph.D., Research Assistant in Neuroanatomy.

IN THE DEPARTMENT OF BIOCHEMISTRY

Roger F. Varney, A.B., Research Assistant in Biochemistry.

IN THE DEPARTMENT OF PATHOLOGY

Julian Herman Lewis, Ph.D., M.D., Associate Professor of Pathology.

IN THE DEPARTMENT OF PHARMACOLOGY

F. Ellis Kelsey, Ph.D., Research Associate in Pharmacology.
Robert T. Stormont, Ph.D., Research Assistant in Pharmacology.

IN THE DIVISION OF PSYCHIATRY IN THE DEPARTMENT OF MEDICINE

Theodore Johnston Case, S.B., M.D., Assistant Professor of Neurophysiology.
Ward Campbell Halstead, Ph.D., Assistant Professor of Experimental Psychology.
Eva Ruth Balken, Ph.D., Instructor in Psychology.
Daniel Warren Stanger, Ph.D., Instructor in Psychiatry.

IN THE DEPARTMENT OF PSYCHOLOGY

Heinrich Klüver, Ph.D., Professor of Experimental Psychology.

MEMBERS OF THE STAFF OF THE DIVISION OF PSYCHIATRY IN THE DEPARTMENT OF MEDICINE

David Slight, M.B., Ch.B., D.P.M., M.R.C.P.(C.), Professor of Psychiatry.
Hugh Thompson Carmichael, S.M., M.D., C.M., Assistant Professor of Psychiatry.
Jules Hymen Masserman, M.D., Assistant Professor of Psychiatry.
Henry Walter Brosin, A.B., M.D., Assistant Professor of Psychiatry.
Joan Fleming, A.M., M.D., Instructor in Psychiatry.
Frances Hannett, S.M., M.D., Instructor in Psychiatry, Health Service.
Adrian Hold Vander Veer, S.B., M.D., Instructor in Psychiatry.
Charlotte Gertrude Babcock, A.B., M.D., Assistant and Resident in Psychiatry.

THE DEPARTMENT OF SURGERY

OFFICERS OF INSTRUCTION

Dallas B. Phemister, Chairman of the Department of Surgery.

GENERAL SURGERY

Dallas B. Phemister, M.D., Professor of Surgery.
Lester Reynold Dragstedt, Ph.D., M.D., Professor of Surgery.
Alexander Brunschwig, S.M., M.D., Professor of Surgery.
Hilger Perry Jenkins, S.B., M.D., Associate Professor of Surgery.
William Elias Adams, S.B., M.D., Associate Professor of Surgery.
Keith Sanford Grimson, S.B., M.D., Instructor and Resident in Surgery.
Dwight Edwin Clark, A.M., M.D., Assistant and Assistant Resident in Surgery.
Ormand C. Julian, S.B., M.D., Assistant and Assistant Resident in Surgery.
T. Howard Clarke, A.B., M.D., Assistant and Assistant Resident in Surgery.
J. Garrott Allen, A.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Ansgar Kolhede Rodholm, A.M., M.D., Research Assistant in Surgery.
Alvin J. Carlson, S.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Frederick M. Owens, A.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Richard A. Rasmussen, A.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Paul W. Schafer, A.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Clarence Hodges, Research Assistant in Surgery.

NEUROSURGERY

Paul C. Bucy, S.M., M.D., Associate Professor of Surgery.
Arthur Earl Walker, A.B., M.D., Assistant Professor of Surgery.
William H. Sweet, S.B., M.D., Instructor in Surgery.
Thomas Astley Weaver, Jr., M.D., Assistant and Resident in Surgery.
Ruth Irene Barnard, Ph.D., M.D., Research Assistant in Surgery, Douglas Smith Foundation.

OPHTHALMOLOGY

Edward Vail Lapham Brown, S.B., M.D., Professor of Surgery.
Louis Bothman, S.B., M.D., Clinical Professor of Surgery.
Arlington Colton Krause, Ph.D., M.D., Assistant Professor of Surgery.
William M. Jones, A.B., M.D., Clinical Assistant in Surgery.
Mary Jane Fowler, A.B., M.D., Assistant in Surgery.
Justin Martin Donegan, M.D., Assistant in Surgery.
Richard Warren Ashley, M.D., Assistant and Resident in Surgery.
Jerome A. Gans, A.B., M.D., Assistant and Resident in Surgery.
Ralph Waldo Barris, Ph.D., Research Assistant in Surgery.
John W. Doolittle, A.B., M.D., Assistant and Assistant Resident in Surgery.
Benjamin Milder, M.D., Assistant and Assistant Resident in Surgery.

ORTHOPEDIC SURGERY

Cly Howard Hatcher, M.D., Associate Professor of Surgery.
Sam Wallace Banks, S.B., M.D., Instructor and Resident in Surgery.
George Thomas Wallace, S.B., M.D., Assistant and Assistant Resident in Surgery.
Donald Ross, M.D., Research Assistant in Surgery, Douglas Smith Foundation.
Francis P. Walsh, S.B., M.D., Assistant and Assistant Resident in Surgery.

OTOLARYNGOLOGY

John Ralston Lindsay, M.D., Professor of Surgery.
Henry B. Perlman, S.B., M.D., Assistant Professor of Surgery.
Heinrich Kobrak, M.D., Ph.D., Research Associate in Surgery, Douglas Smith Foundation.
Bruce Proctor, M.D., Instructor in Surgery.
Joseph Wepman, A.M., Assistant in Surgery.
Irving M. Shevick, S.B., M.D., Assistant in Surgery.
Younger Alexander Staton, S.B., M.D., Assistant and Resident in Surgery.

UROLOGY

Charles Brenton Huggins, A.B., M.D., Professor of Surgery.
Cornelius William Vermeulen, A.B., M.D., Assistant and Assistant Resident in Surgery.
Roland Eugene Stevens, A.B., M.D., Assistant and Assistant Resident in Surgery.

ANESTHESIA

Huberta Livingstone, S.B., M.D., Assistant Professor of Surgery.
Geraldine Agnes Light, A.B., M.D., Instructor in Surgery.
Rose Engel, M.D., Instructor in Surgery.
Irene Shank, M.B., M.D., Assistant and Assistant Resident in Surgery.

Margaret Campbell Winters, R.N., Instructor in Surgery (Physiotherapy).

INTRODUCTORY

The instruction is given in the form of an introductory course, an externship in the hospital, clerkships in the out-patient department, amphitheater clinics, and advanced work in the special fields of general surgery and in the surgical specialties. Opportunities are offered qualified students for research work, and a limited number of internships, assistant residencies, and residencies are available in general surgery and in the surgical specialties.

DEGREES

THE DEGREE OF DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of 5 courses in general surgery and the surgical specialties and to pass a general examination in general surgery, urology, orthopedics, otolaryngology, and ophthalmology. Examinations are offered during the second half of each quarter. Candidates for the M.D. degree *with honors* in Surgery must have maintained a better than average grade for the four years of the medical curriculum, and are required in addition to prepare a satisfactory thesis based on independent research and constituting an actual contribution to knowledge.

THE DEGREE OF MASTER OF SCIENCE

The Degree of Master of Science is granted in the Department of Surgery upon the fulfilment of the following requirements: residence for at least three quarters subsequent to the granting of the degree of Doctor of Medicine; 8 courses of satisfactory grade level, 6 of which shall have been done in the University of Chicago; a satisfactory dissertation approved by the Chairman of the Department; and a satisfactory examination in some special field of surgery. Work as an undergraduate extern or intern or as resident is not counted toward the degree of Master of Science. Candidates who have active clinical responsibilities, such as residents, are not permitted to register for more than one course a quarter toward this degree.

The Divisional Master's degree is not granted in this Department.

THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy in Surgery is recommended only for students who have completed the work required for the degree of Doctor of Medicine, who have submitted a thesis embodying original research approved by the Department of Surgery, and who have completed satisfactorily an amount of advanced work equivalent to that required for the degree of Doctor of Philosophy in the Division of the Biological Sciences.

FELLOWSHIPS

Fellowships from the Douglas Smith Foundation may be awarded to properly qualified candidates for research work in the Department of Surgery.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

I. GENERAL SURGERY, ORTHOPEDICS, AND UROLOGY

Conjoint Clinical Course 301. Introductory Course.—See page 31.

Conjoint Clinical Course 302.—See page 31.

303. Externship in Hospital.—The student works full time for one quarter as a member of a team responsible for the care of patients and for the investigation of disease. In the forenoons the student is engaged in ward rounds, assisting at operations, administration of anesthetics, and history-taking. Rounds are made three mornings weekly in general surgery and one morning each in orthopedics, neurosurgery, and genito-urinary surgery. The hour from twelve to one o'clock daily is spent at the conjoint clinical lectures. The afternoon work includes surgical pathology, history-taking, laboratory work, and assisting at dressings. Includes half-course credit in therapeutics. Prerequisite: Pathology 302. 3Cs. each quarter. ADAMS, BUCY, BRUNSCHWIG, DRAGSTEDT, HATCHER, HUGGINS, JENKINS, PHEMISTER, WALKER.

304. Externship in Out-Patient Department in General Surgery, Orthopedics, and Genito-urinary Surgery.—Under supervision the student participates in the diagnosis and treatment of conditions presented by ambulatory patients, rotating through general surgery, orthopedics, and urology, and may visit patients who have been hospitalized after having been seen in the out-patient department. This includes Conjoint Course 350. Prerequisite: Surgery 303 or Medicine 303 or Obstetrics and Pediatrics 303. 1½Cs. each quarter. *Group A*, M., W., F., 2:00–4:30; *Group B*, Tu., 2:00–4:30, and Sat., 10:00–12:00.

307. Ward Visits with Externs.—Prerequisite: Consent of instructor. ½C. Autumn, Winter, Spring, M., W., F., 8:00–9:00; Tu., Th., S., 9:00–10:00; PHEMISTER AND STAFF.

Conjoint Clinical Course 350.—See page 31.

351. Surgical Anatomy and Operative Surgery.—Two 2-hour periods weekly. Prerequisite: Surgery 303. ½C. Autumn, Spring, ADAMS.

352. Physiotherapy.—For Seniors. Limited to 6. 1 hour, 3 days weekly. ½C. Hours to be arranged, HATCHER, WINTERS, AND STAFF.

357. Advanced Work in Surgical Pathology.—Limited to Seniors. Hours to be arranged, BRUNSCHWIG.

402. Research in Surgery.—C.–3Cs. each quarter. ADAMS, BRUNSCHWIG, HATCHER, DRAGSTEDT, HUGGINS, JENKINS, PHEMISTER.

411. Seminar and Surgical Pathological Conference.—Weekly. No credit.

II. OPHTHALMOLOGY

311. Externship in Ophthalmology.—A lecture, laboratory, and clinical course including theoretical and clinical work and the study and drawing of prepared specimens. ¾C. each quarter. 1 term, M.–F., 9:00–12:00, BROWN, BOTHMAN, KRAUSE.

353. Special Pathology of the Eye.—A course for ophthalmologists, consisting of three parts: (1) lectures on the pathogenesis of eye diseases; (2) study of pathological specimens illustrating principles; and (3) the correlation of clinical and postmortem findings. 4 hours weekly. ½C. each quarter. BROWN.

355. Medical Ophthalmology.—A course designed to meet the needs of consultants, especially in the fields of internal medicine, neurology, and pediatrics, given daily in the wards of the hospital. 4 hours weekly. ½C.

403. Research in Ophthalmology.—Research on (1) morphologic problems under Dr. Brown; (2) physiological problems under Dr. Bothman; and (3) physiological chemistry problems under Dr. Krause. C.–3Cs. each quarter.

412. Seminar.—Weekly, F., BROWN.

III. OTOLARYNGOLOGY

321. Externship in Otolaryngology.—A lecture, laboratory, and clinical course. 1 term, M.–F., 9:00–12:00, OPD. ¾C. each quarter, LINDSAY AND STAFF.

322. Advanced Work.—Maximum of 4 days weekly. Up to 6 courses.

323. Abnormalities of Voice and Speech.—A combined lecture, demonstration, and discussion course covering the differential diagnosis and demonstration of speech cases plus discussion of techniques in therapy. Open to medical students and a limited number of advanced students in education or psychology. ½C. 2½ hours weekly. Hours to be arranged, WEPMAN.

404. Research in Otolaryngology.—C.–3Cs. LINDSAY.

IV. NEUROSURGERY

Conjoint Clinical Course 301.—See page 31.

Conjoint Clinical Course 302.—See page 31.

Conjoint Clinical Course 350.—See page 31.

303. Externship in Hospital.—Neurosurgical cases assigned to students in rotation. Each quarter. Rounds, M., 8:00–9:00, BUCY, WALKER.

331. Externship in Out-Patient Department.—Limited to 4. Prerequisite: 2¼Cs. of Surgery 303 or the equivalent. Summer, Autumn, Winter, Spring, M., W., F., BUCY, WALKER.

416. Research in Diseases of the Nervous System.—Open to qualified students by arrangement. C.–3Cs. Each quarter, BUCY, WALKER.

THE DEPARTMENT OF ZOÖLOGY

OFFICERS OF INSTRUCTION

Carl Richard Moore, Chairman of the Department of Zoölogy.
Thomas Park, Secretary of Department.

Horatio Hackett Newman, Ph.D., Sc.D., Professor Emeritus of Zoölogy.
Warder Clyde Allee, Ph.D., Professor of Zoölogy.
Carl Richard Moore, Ph.D., Professor of Zoölogy.
Sewall Wright, Sc.D., Ernest D. Burton Distinguished Service Professor of Zoölogy.
Alfred Edwards Emerson, Ph.D., Professor of Zoölogy; Student Counselor.
Paul Alfred Weiss, Ph.D., Associate Professor of Zoölogy.
Lincoln Valentine Domm, Ph.D., Research Associate in Zoölogy.
Thomas Park, Ph.D., Assistant Professor of Zoölogy.
Ralph Morris Buchsbaum, Ph.D., Assistant Professor of Zoölogy in the College.
Graham Phillips DuShane, Ph.D., Instructor in Zoölogy.
Dorothy Price, Ph.D., Research Associate in Zoölogy.
Herluf Haldan Strandskov, Ph.D., Instructor in Zoölogy in the College.
Asher Joseph Finkel, S.B., Research Assistant in Zoölogy.
Hsi Wang, S.M., Research Assistant in Zoölogy.
Ruth Minerva Merwin, A.M., Research Assistant in Zoölogy.
Roger Wolcott Sperry, A.M., Assistant in Zoölogy.
William Dudley Burbanck, S.M., Assistant in Zoölogy.
Victor Dropkin, A.B., Assistant in Zoölogy.
James Clarence Plagge, S.B., Assistant in Zoölogy.
Robert Edmond Gregg, S.B., Assistant in Zoölogy.
Agnes Burt Braddock, A.B., Assistant in Zoölogy.
Nicholas E. Collias, S.B., Assistant in Zoölogy.
Jerry John Kollros, S.B., Assistant in Zoölogy.
Catharine Z. Lutherman, S.B., Assistant in Zoölogy.
Albert Cecil Taylor, S.M., Assistant in Zoölogy.

Gerald Olin Rulon, Ph.D., Instructor in Biology, Wayne University, Detroit (Summer, 1940).

Charles Manning Child, Ph.D., Sc.D., Professor Emeritus of Zoölogy.
Frank Rattray Lillie, Ph.D., Sc.D., Andrew MacLeish Distinguished Service Professor Emeritus of Embryology.

FELLOWS, 1939–40

Robert Gregg, S.B.
James C. Braddock, A.B.
A. Cecil Taylor, A.B.
Rupert L. Wenzel, A.B.
Stewart Clare, S.M.
Charles Frederick Morgan, A.B.
Nicholas Collias, S.B., Ridgway Fellow
Dale W. Jenkins, A.M., Ridgway Fellow

INTRODUCTORY

The courses in zoölogy are intended to meet the needs of those students who desire to obtain some knowledge of zoölogy as part of their general education, those who need work in zoölogy to satisfy the requirements of other departments, and those who propose to specialize in zoölogy.

It is advisable that students who propose to *specialize* in zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of French and German. More specifically, students specializing in zoölogy should have training equivalent to 4 or 5 courses in chemistry, 2 or 3 in physics, and 1 or 2 in geology; they should also obtain knowledge of the general principles of microscopical anatomy, paleontology, botany, and physiology. These courses may be taken concurrently with the work in zoölogy.

THE BACHELOR'S DEGREE

Students are admitted to the Department who have previous training in general, inorganic, and elementary organic chemistry (Chemistry 104, 105, 120, or equivalents), and who also satisfy the general requirements for admission to the Division.

Entering students who expect to specialize in zoölogy are advised during their first year to prepare, by formal or informal work, to pass the comprehensive examination based on the general course in biology and to take the biological laboratory sequence (Botany 101, Zoölogy 101, and Physiology 101) during their second year.

Zoölogy 201, 202, 203, and 205 present a comprehensive survey of the animal kingdom. While these courses may be taken in any order, best results are obtained if taken as a sequence in the order indicated.

On admission to the Division, each student specializing in the Department arranges a program in consultation with Dr. Emerson, the Departmental Counselor, in accordance with the Divisional practice as follows: one-third of the work in zoölogy, one-third in related departments, and one-third in free electives. (Of this last one-third, not more than one-half may be taken in zoölogy.) The work in zoölogy includes the following fundamental courses: Zoölogy 201, 202, 203, 205, 207, and 220.

HIGHER DEGREES

Students proposing to be candidates for the degree of Master of Science or of Doctor of Philosophy in Zoölogy must have basic training equivalent to that required for the Bachelor of Science degree in this Department.

THE DEGREE OF MASTER OF SCIENCE

The Departmental degree.—Departmental prerequisites: 9 additional courses in the Department, or related departments (approved by the Counselor), including a satisfactory thesis based upon original research, and the Departmental examination. For general Divisional requirements see pages 72–73, *Announcements of the College and the Divisions.*

The Divisional degree.—Departmental prerequisites: 9 additional courses in the Division, of which not less than 3 must be taken in the Department, and not more than 3 in a single related department (program approved by the Counselor), including a comprehensive essay approved by the immediate supervisor. For general Divisional requirements see page 73, *Announcements of the College and the Divisions.*

THE DEGREE OF DOCTOR OF PHILOSOPHY

The Divisional requirements are stated on pages 73–74, *Announcements of the College and the Divisions.*

Departmental prerequisites.—(1) An examination on the fundamentals of zoölogy before admission to candidacy and (2) 3 or 4 formal courses and 3 or more seminar courses in the Department, depending on previous preparation. The principal emphasis is placed on research, in connection with which all requirements necessary for a scholarly piece of work will be demanded.

There are a number of Faculty members located in other departments of the University who are specialists in phases of zoölogy not actively represented on the departmental staff. By consent of the Department in individual cases, advanced degrees may be taken in Zoölogy with the thesis work done under the direction of certain of these men.

THE PREPARATION OF TEACHERS

Students who are preparing to teach in secondary schools or in junior colleges should refer to the general statements on pages 76–78 of the *Announcements of the College and the Divisions*, secure a copy of the *Announcements* entitled *The Preparation of Teachers*, and consult the Departmental Counselor, Dr. Emerson, in arranging their programs.

THE ZOÖLOGY CLUB

The Zoölogy Club holds open meetings weekly for the presentation of research results and for review and discussion of important new literature.

COURSES OF INSTRUCTION

The unit of instruction is a "course" (C.).

Courses marked * require payment of a laboratory fee by all except medical students.

COURSE IN THE COLLEGE

***101. General Zoölogy.**—See page 55, *Announcements of the College and the Divisions.*

COURSES IN THE DIVISION

***201. Invertebrate Zoölogy I.**—A study of lower invertebrate groups: Protozoa, Porifera, Coelenterata, Plathelminthes, Nemathelminthes. Prerequisite: Zoölogy 101 or equivalent. Lectures, laboratory work, and demonstrations. Summer: lecture, M., Tu., 10:00; laboratory, W., Th., F., 10:00–12:00; Rulon. Autumn: conference, Tu., 8:00; lecture, M., Tu., 9:00; laboratory, W.–F., 8:00–10:00; Allee.

***202. Invertebrate Zoölogy II.**—Comparative anatomy, development, and phylogeny of the higher invertebrate groups with the exception of Arthropoda. Prerequisite: Zoölogy 101 or equivalent. Winter: lecture, M., Tu., 9:00; laboratory, W.,–F., 8:00–10:00; Weiss.

***203. Invertebrate Zoölogy III.**—Comparative anatomy, development, phylogeny, and physiology of the arthropods. Prerequisite: Zoölogy 101 or equivalent. Spring: lecture, M., Tu., 9:00; laboratory, W.–F., 8:00–10:00; Park.

***205. Vertebrate Zoölogy.**—Comparative anatomy, development, and phylogeny of vertebrates. Prerequisite: Zoölogy 101 or equivalent. Summer, M.–F., 1:30–3:30; Winter, M.–F., 10:00–12:00; DuShane; Spring, M.–F., 1:30–3:30, ———.

207. Field Zoölogy.—An introduction to local animal life based upon classification, distribution, and natural history of the animal phyla of this region. Prerequisite: Zoölogy 101 or equivalent. Summer: lecture, W., F., 9:00; Autumn: lecture, Tu., F., 1:30; laboratory as arranged; field all day Saturday; EMERSON.

211. Human Genetics.—A course dealing chiefly with variation and heredity in man. General genetic principles are introduced and are followed by a discussion of the modes of inheritance of normal and pathological traits in man, both physical and mental. Prerequisite: Introductory General Course in the Biological Sciences or its equivalent. Autumn: lecture, Tu.–F., 10:00, STRANDSKOV.

***220. Vertebrate Embryology.**—Birds and mammals. Lectures, demonstrations, and laboratory work. Prerequisite: Zoölogy 101 and 205 or equivalent. Summer: lecture, M., W., Th., 8:00; laboratory, M., W., 9:00–12:00; Autumn: lecture, M., W., Th., 1:30; laboratory, M., Th., 2:30–5:30; DUSHANE; Spring: lecture, W.–F., 1:30; laboratory, M., Tu., 1:30–4:30; MOORE.

303. Animal Geography.—A study of the world-distribution of animals, together with factors causing and limiting distribution. Lectures, conferences, and assigned topics. Winter, M.–F., 1:30, ALLEE.

304. Animal Ecology.—The relations between animals and their environment are illustrated (1) by field and laboratory studies upon the nature and evolution of animal communities and (2) by a consideration of significant experimental and quantitative results. Prerequisite: Zoölogy 207 or equivalent. Spring: lecture, W.–F., 11:00; laboratory as arranged; field analyses, Saturday; PARK.

***305. Animal Behavior.**—Analysis of animal activities with reference to the physiology and comparative psychology of invertebrates and lower vertebrates. Prerequisite: 3 courses in zoölogy and 3 in chemistry. Autumn: lecture, M.–F., 11:00; laboratory as arranged; ALLEE.

***310. Fundamental Genetics.**—Discussion of the mechanism of heredity. Laboratory work with *Drosophila melanogaster*. Prerequisite: Zoölogy 101. Winter, Tu.–F., 10:00, WRIGHT.

311. Biometry.—Frequency distributions, correlation, systems of interrelated variables, tests of the significance of differences. Prerequisite: Mathematics 104 or equivalent. Spring, Tu.–F., 2:30, WRIGHT.

313. Evolution.—On the nature of the evolutionary process, the factors of evolution, and the possibilities of control. These problems are related to the theory of genetics of populations. Prerequisite: Zoölogy 310 or Botany 250, or equivalent. Summer: lecture, Tu.–F., 2:30, WRIGHT.

***318. General Embryology.**—An outline of the principles and mechanisms of development. Fundamentals of experimental and comparative embryology. Prerequisite: Zoölogy 220 or equivalent. Autumn: lecture and laboratory, M.–F., 8:00–10:00, WEISS.

***351. Biology of the Endocrines.**—General consideration of the organs of internal secretion. Phylogeny, embryology, microscopic anatomy, and physiology. Class limited. Prerequisite: Zoölogy 205 and 220. Summer, Winter: lecture, M., Tu., W., 1:30; laboratory, Th., F., 1:30–3:30; MOORE.

***399. Problems in Experimental Zoölogy.**—An individual problem course in beginning research for advanced students to undertake individual laboratory or library problems in special phases of zoölogy—experimental embryology, biology of sex, ecology, animal behavior, neurobiology, genetics. Registration only after consultation with appropriate instructor. Each quarter, hours to be arranged, STAFF.

406. Experimental Embryology of the Nervous System.—Analysis of the factors operating in the development, regeneration, and adjustments of the nervous system, particularly in relation to its functions. Lectures and discussion. Winter, hours to be arranged, WEISS.

411. Animal Aggregations.—An introduction to general sociology from the point of view of mass physiology. Spring, hours to be arranged, ALLEE.

415. Problems of Speciation.—An analysis of the physiological, ecological, and geographic factors associated with the origin of species; techniques of research. Winter, hours to be arranged, EMERSON.

416. Problems in the Biology of Social Insects.—Organismic principles exhibited by the social insects; techniques of research; discussion of literature. Summer, hours to be arranged, EMERSON.

422. The Biology of Sex.—A consideration of the biological problems of sex. Summer, Autumn, hours to be arranged, MOORE.

***450. Zoölogical Problems.**—Research work for advanced students. Prerequisite: Training essential to the special topic undertaken. Hours to be arranged, STAFF.

452. Zoölogical Problems.—Research, Woods Hole, STAFF.

COURSES NOT OFFERED IN 1940–41

312. Physiological Genetics.—WRIGHT.

319. Physiology of Development.—WEISS.

352. Endocrines and Reproduction.—MOORE.

417. The Biology of Populations.—PARK.

430. Physiology of Reproduction.—MOORE.

RELATED COURSES

The attention of students in zoölogy is particularly called to the following courses:

Anatomy 305. Histology.

Anatomy 310. Introduction to Histological Research.

Bacteriology 320. Parasitology.

Geology 360–361. Invertebrate Paleontology.

Geology 370–371. Vertebrate Paleontology.

Physiology 403, 404. General Physiology.

RUSH MEDICAL COLLEGE
OF THE UNIVERSITY OF CHICAGO

RUSH MEDICAL COLLEGE OF THE UNIVERSITY OF CHICAGO

THE DEPARTMENT OF PATHOLOGY

OFFICERS OF INSTRUCTION

LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor Emeritus of Pathology.
GEORGE HOWITT WEAVER, M.D., Professor Emeritus of Pathology.

CARL WESLEY APFELBACH, M.D., Associate Professor of Pathology.
EDWIN FREDERIC HIRSCH, PH.D., M.D., Associate Professor of Pathology.
GEORGE J. RUKSTINAT, S.B., M.D., Associate Professor of Pathology.
ISRAEL DAVIDSOHN, M.D., Assistant Professor of Pathology.
CORNELIUS S. HAGERTY, M.D., Assistant in Pathology.
MILNOR R. FREELAND, S.B., Assistant in Pathology.
G. BERNICE RHODES, A.M., Assistant in Pathology.
CORNELIUS S. HAGERTY, M.D., E. R. LeCount Fellowship in Pathology, established by Dr. Frank Billings.

COURSES OF INSTRUCTION

12. Special Pathologic Anatomy and Histology.—Limited to twenty-five students. Practical instruction given in the methods of making post-mortem examinations and of recording the results. The student studies and describes the gross and microscopic appearance of diseased organs and tissue. Bacteriologic and chemical methods and experiments employed whenever indicated and the clinical relations (pathologic physiology) of the morbid conditions emphasized. Prerequisite: Pathology 1 and 2 and at least one quarter of clinical work. Daily, 2:00–4:00, and autopsies. 144 hours. 1.2Mjs. Autumn, Winter, Spring, HIRSCH, APFELBACH, RUKSTINAT.

12A. A Continuation of Course 12 for Students Taking Additional Work Along the Same Lines.—Hours to be arranged; two hours daily. 144 hours. 1.2Mjs. Autumn, Winter, Spring, HIRSCH, APFELBACH, RUKSTINAT.

13. The Histology and Diagnosis of Tumors.—Prerequisite: Pathology 201 and 202. 8:00–10:00. 72 hours. Mj. Autumn.

14. Infection and Immunity.—A lecture course. Autumn, Second Term, W., Sat., 8:00. 12 hours. 2Mj. HEKTOEN AND ASSISTANTS.

17. Advanced Laboratory Work and Research in Pathology.—A course open to a limited number of specially qualified students and graduates in medicine. Hours arranged for each student. Credit given based on time and quality of work. Throughout the year. HEKTOEN.

18. Pathology Conferences.—At Rush Medical College or Presbyterian Hospital, S., 11:00–1:00; at Cook County Hospital, Th., 11:00–1:00. Throughout the year. Open to all students. No credit.

19. Morbid Anatomy.—Museum attendance, required for all students throughout the year. Limited to groups of 25. ½ hour, one day a week. 6 hours.

THE DEPARTMENT OF MEDICINE
RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

Ernest Edward Irons, Chairman of the Department of Medicine.

James Bryan Herrick, A.M., M.D., Sc.D., Professor Emeritus of Medicine.
Rollin Turner Woodyatt, S.B., M.D., Clinical Professor of Medicine.
Wilber E. Post, M.D., Clinical Professor of Medicine.
Ernest Edward Irons, M.D., Ph.D., Clinical Professor of Medicine.
Ralph Crissman Brown, S.B., M.D., Clinical Professor of Medicine.
Frederick Tice, M.D., Clinical Professor of Medicine.
Arthur R. Elliott, M.D., Clinical Professor of Medicine.
Lee Connel Gatewood, A.M., M.D., Clinical Professor of Medicine.
George E. Miller, Ph.D., M.D., Associate Clinical Professor of Medicine (Materia Medica and Toxicology).
William Duncan McNally, A.B., M.D., Associate Clinical Professor of Medicine (Materia Medica and Toxicology).
Aaron Arkin, Ph.D., M.D., Associate Clinical Professor of Medicine.
Yale Norman Levinson, M.D., Associate Clinical Professor of Medicine.
Frank Brazzil Kelly, M.D., Associate Clinical Professor of Medicine.
Francis Leo Foran, S.M., M.D., Associate Clinical Professor of Medicine.
Sidney A. Portis, M.D., Associate Clinical Professor of Medicine.
Ralph W. Trimmer, M.D., Associate Clinical Professor of Medicine.
Howard Martin Sheaff, Ph.D., M.D., Associate Clinical Professor of Medicine.
Willard Owen Thompson, M.D., Associate Clinical Professor of Medicine.
William Alexander Thomas, M.D., Associate Clinical Professor of Medicine.
Leo K. Campbell, M.D., Associate Clinical Professor of Medicine.
William George Hibbs, M.D., Associate Clinical Professor of Medicine.
Thomas Gervase Walsh, M.D., Associate Clinical Professor of Medicine.
Evans W. Pernokis, M.D., Associate Clinical Professor of Medicine.
Homer King Nicoll, M.D., Assistant Clinical Professor of Medicine.
Morris Fishbein, M.D., Assistant Clinical Professor of Medicine.
Disraeli William Kobak, M.D., F.R.C.R. (London), Assistant Clinical Professor of Medicine (Physiotherapy).
Carl O. Rinder, M.D., Assistant Clinical Professor of Medicine.
Frederick Olaf Fredrickson, M.D., Assistant Clinical Professor of Medicine.
Harry H. Freilich, M.D., Assistant Clinical Professor of Medicine.
Samuel James Taub, M.D., Assistant Clinical Professor of Medicine.
Margaret Howard Austin, M.D., Assistant Clinical Professor of Medicine.
Eugene Fagan Traut, M.D., Assistant Clinical Professor of Medicine.
Abraham M. Serby, M.D., Assistant Clinical Professor of Medicine.
Stephen Pantelis Anthony, M.D., Assistant Clinical Professor of Medicine.
Meyer R. Lichtenstein, M.D., Assistant Clinical Professor of Medicine.

Alva A. Knight, M.D., Assistant Clinical Professor of Medicine.
Clayton J. Lundy, M.D., Assistant Clinical Professor of Medicine.
James Bryan Eyerly, M.D., Assistant Clinical Professor of Medicine.
Robert Eastnor Johannesen, M.D., Assistant Clinical Professor of Medicine.
Earle Gray, M.D., Assistant Clinical Professor of Medicine; Acting Dean.
Benjamin H. Hilkevitch, M.D., Assistant Clinical Professor of Medicine.
Jay Bailey Carter, M.D., Assistant Clinical Professor of Medicine.
Lewis W. Woodruff, M.D., Assistant Clinical Professor of Medicine.
Elizabeth Kales Straus, A.B., M.D., Assistant Clinical Professor of Medicine.
Willard L. Wood, M.D., Assistant Clinical Professor of Medicine.
Hall Ivan Sippy, S.M., M.D., Assistant Clinical Professor of Medicine.
E. Ransom Koontz, M.D., Lecturer in Medicine (Medical Jurisprudence).
Ross Stanley Lang, M.D., Clinical Instructor in Medicine.
Irving Treiger, M.D., Clinical Instructor in Medicine.
Max Peter Gethner, M.D., Clinical Instructor in Medicine.
Charles Arthur Sima, M.D., Clinical Instructor in Medicine.
Charles Melville Bacon, A.B., M.D., Clinical Instructor in Medicine.
Maurice Simkin, M.D., Clinical Instructor in Medicine.
William Simkin, M.D., Clinical Instructor in Medicine.
William James Kirby, M.D., Clinical Instructor in Medicine.
John A. Gardiner, M.D., Clinical Instructor in Medicine.
George C. Turner, M.D., Clinical Instructor in Medicine.
Stuyvesant Butler, M.D., Clinical Instructor in Medicine.
Evan M. Barton, M.D., Clinical Instructor in Medicine.
Edward E. Stearns, M.D., Clinical Instructor in Medicine.
Willis E. Gouwens, M.D., Clinical Instructor in Medicine.
Arthur Stenn, M.D., Clinical Instructor in Medicine.
Samuel Gale Taylor III, M.D., Clinical Instructor in Medicine.
Stanley Brownstein, M.D., Clinical Instructor in Medicine.
Thomas Addison Baird, M.D., Clinical Instructor in Medicine.
George W. Stuppy, M.D., Clinical Instructor in Medicine.
Joseph R. Bennett, M.D., Clinical Instructor in Medicine.
Herbert C. Breuhaus, M.D., Clinical Instructor in Medicine.
James Lisle Williams, A.M., M.D., Clinical Associate in Medicine.
Esther Frankel, M.D., Clinical Associate in Medicine (Physiotherapy).
Allan S. Shohet, M.D., Clinical Associate in Medicine.
Jaroslav Tetrev, M.D., Clinical Associate in Medicine.
Rudolph Hennemeyer, M.D., Clinical Associate in Medicine.
Zachary A. Blier, M.D., Clinical Associate in Medicine.
George G. Hallenbeck, M.D., Clinical Associate in Medicine.
Thomas A. Kallal, M.D., Clinical Associate in Medicine.
Philip L. Peterson, M.D., Clinical Associate in Medicine.
Joachim A. Riedel, M.D., Clinical Associate in Medicine.
Leon H. Gorfinkel, M.D., Clinical Associate in Medicine.
C. Helge M. Janson, M.D., Clinical Associate in Medicine.
Jacob S. Fishman, M.D., Clinical Associate in Medicine.
Catharine Elizabeth Logan, M.D., Clinical Associate in Medicine.

Albert A. Loverde, M.D., Clinical Associate in Medicine.
John P. J. Milroy, M.D., Clinical Associate in Medicine.
Armin F. Schick, M.D., Clinical Associate in Medicine.
John E. Tysell, M.D., Clinical Associate in Medicine.
Frank W. Blatchford, Jr., M.D., Clinical Associate in Medicine.
Willard C. De Young, M.D., Clinical Associate in Medicine.
Edwin F. Neckermann, M.D., Clinical Associate in Medicine.
John Post, M.D., Clinical Associate in Medicine.
Seymour Weisberg, M.D., Clinical Associate in Medicine.
Zachary Felscher, M.D., Clinical Associate in Medicine.
Bertram Nelson, M.D., Clinical Associate in Medicine.
Joseph A. Hubata, M.D., Clinical Assistant in Medicine.
Harold V. Bonebrake, M.D., Clinical Assistant in Medicine.
John Wesley Foster, M.D., Clinical Assistant in Medicine.
Arthur A. Fuhlbrigge, M.D., Clinical Assistant in Medicine.
S. Kenneth Robinson, M.D., Clinical Assistant in Medicine.
Charles I. Leff, M.D., Clinical Assistant in Medicine.
Samuel J. Mark, M.D., Clinical Assistant in Medicine.
Richard Edgard Somma, M.D., Clinical Assistant in Medicine.
Roland L. Kesler, M.D., Clinical Assistant in Medicine.
Theodore S. Proud, M.D., Clinical Assistant in Medicine.
Noah B. Levin, M.D., Clinical Assistant in Medicine.
Clementine E. Frankowski, M.D., Clinical Assistant in Medicine.
George W. Holmes, M.D., Clinical Assistant in Medicine.
Carl Olander, M.D., Clinical Assistant in Medicine.

FELLOWS

————————, Wilber E. Post Fellowship (established by Dr. Frank Billings).
————————, James B. Herrick Fellowship (established by Dr. Frank Billings).
————————, Ernest E. Irons Fellowship (established by Dr. Frank Billings).

INTRODUCTORY

In this department instruction is given in the topics usually comprised under the terms Internal Medicine, Neurology, Materia Medica, Therapeutics, Toxicology, and Medical Jurisprudence. Each student is required to complete 6 majors in the Department of Medicine, of which at least .6 major must be in neurology, .4 major in psychiatry, and 2 majors in materia medica, therapeutics, and toxicology. The courses specifically required are, in medicine proper, 0, 2, 5, 6, 50, 61, and 64. Three-tenths of a major of Course 6 is credited to neurology.

In addition to courses in therapeutics dealing with the use of drugs in the treatment of disease, the student is given practical instruction in therapeutics during his clinical clerkship in the Presbyterian Hospital and other hospitals where he follows the course of the patient and observes the results of treatment.

Courses in clinical medicine dealing specifically with therapeutics (for example, 23) or in part with therapeutics (course 50, .6Mj. credit) may be applied on the required credit in materia medica and therapeutics.

COURSES OF INSTRUCTION

INTERNAL MEDICINE

0. Practice of Medicine.—A conference and recitation course on the essentials of the practice of medicine designed to afford a general survey of the more important diseases and conditions in preparation for the clinical courses. Limited to 30 in each section. M., W., F., 8:00. 36 hours. .6Mj. Autumn, Spring, KELLY, LEVINSON, PERNOKIS, SHEAFF, WALSH.

2. Physical Examination.—A conference and practical course on the methods of physical exploration, chiefly of the normal body. Sections *a, b, c, d, e*, M., Th., 9:00–11:00; Sections *f, g, h, i, j*, W., Sat., 9:00–11:00. All sections will meet on Friday, 12:00–1:00. 60 hours. .5Mj. Autumn, GATEWOOD AND OTHERS.

3A. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer, general medicine; Autumn, heart and respiratory diseases; Winter, general medicine; Spring, infectious diseases. Limited to 10. Tu., F., 9:00–11:00. 48 hours. .4Mj. TRAUT.

3B. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn, infectious diseases; Spring, diseases of blood and ductless glands. Limited to 10. M., Th., 2:00–4:00. 48 hours. .4Mj. KELLY.

3C. Clinic and Conference Course at the Cook County Hospital.—Topic: general medicine. Limited to 10. M., Th., 9:00–11:00. 48 hours. .4Mj. Winter, Spring, LEVINSON.

3E. Clinic and Conference Course at the Cook County Hospital.—Topic: Summer, heart and respiratory diseases. Limited to 10. Tu., F., 9:00–11:00. 48 hours. .4Mj. TAUB.

3F. Clinic and Conference Course at the Cook County Hospital.—Topic: respiratory diseases with special reference to tuberculosis. Each quarter. Limited to 10. W., S., 2:00–4:00. 48 hours. .4Mj. FREILICH.

3H. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn, cardio-vascular and renal diseases; Winter, respiratory diseases. Limited to 10. M., Th., 9:00–11:00. 48 hours. .4Mj. ARKIN.

3J. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn, respiratory diseases; Winter, diseases of chest. Limited to 10. W., S., 9:00–11:00. 48 hours. .4Mj. FORAN.

3K. Clinical and Conference Course at the Cook County Hospital.—Topic: hematology. Tu., F., 9:00–11:00. 48 hours. .4Mj. PERNOKIS.

3R. Clinic and Conference Course at the Cook County Hospital.—Topic: General medicine with special reference to heart. Limited to 10. M., Th., 9:00–11:00. 48 hours. .4Mj. Autumn, Winter, LUNDY.

Additional clinics will be scheduled for the Summer Quarter, if required, to meet the needs of the number of students in residence.

5. Laboratory Diagnosis.—A laboratory course in the chemical, microscopic, and bacteriologic examination of blood, urine, sputum, gastric contents, feces, secretions, exudates, etc., and their pathologic and clinical significance, special attention being given to the acquisition of an accurate technique. Lecture, both sections, Th. 8:00–9:00. Sec. *a*, M., Th., 9:00–11:00; sec. *b*, W., Sat., 9:00–11:00. 60 hours. .4Mj. Autumn, BENNETT AND OTHERS.

6. A Clinical Course.—In the Central Free Dispensary each quarter. In the departments of Internal Medicine, and of Nervous and Mental Diseases, conducted by members of the Department. Prerequisite: Physical and Laboratory Diagnosis. In sections,

one quarter for each section. Four days a week, 9:00–11:00. 96 hours. .8Mj., .3Mj. of which is in Nervous and Mental Diseases. PERNOKIS, WALSH.

6B. Clinical Course at the Central Free Dispensary.—Topic: diabetes. Limited to 2. Prerequisite: Course 6. Each quarter, Th., 9:00–11:00. .2Mj. WOODYATT, CAMPBELL.

6C. Clinical Course at the Central Free Dispensary.—Topic: diseases of the heart and blood vessels. Limited to 6. Prerequisite: Same as for 6B. Each quarter. .4Mj. sec. *a*, M., Th., 9:00–11:00, ANTHONY, J. POST, FELSHER; sec. *b*, Tu., F., 9:00–11:00, SIPPY, WOODRUFF; sec. *c*, W., S., 9:00–11:00, GRAY, WEISBERG.

6D. Clinical Course at the Central Free Dispensary.—Topic: diseases of the alimentary tract. Limited to 4 in each section. Prerequisite: Same as for 6B. .4Mj. Each quarter. Sec. *a*, M., Th., 9:00–11:00, FREDRICKSON; sec. *b*, Tu., F., 9:00–11:00, OLANDER; sec. *c*, W., S., 9:00–11:00, EYERLY.

6E. Clinical Course at the Central Free Dispensary.—Topic: diseases of the kidney. Prerequisite: Same as for 6B. Limited to 4. Each quarter. .4Mj. W., S., 9:00–11:00. LUNDY, HILKEVITCH.

6F. Clinical Course at the Central Free Dispensary.—Topic: allergy. Limited to 2. Prerequisite: Same as for course 6B. Each quarter. .4Mj. M., Th., 9:00–11:00. FORAN, LICHTENSTEIN.

6H. Clinical Course at Central Free Dispensary.—Topic: arthritis. Limited to 2. Each quarter. .4Mj. Tu., F., 9:00–11:00, BARTON.

8. Clinical and Conference Course.—Topic: Diseases of chest with special reference to the technique of physical diagnosis. Limited to 15. 48 hours. .4Mj. Autumn, Tu., F., 9:00–11:00. (Winter and Spring days to be announced.)

9. Clinical Medicine.—General medicine with special reference to metabolic aspects of disease. Each quarter, 24 hours. .2Mj. M., Th., 9:00–10:00, WOODYATT, THOMPSON, CAMPBELL.

10. Clinical Medicine.—General medicine with special reference to cardio-vascular and renal diseases. Autumn, Winter, Spring, M., Th., 10:00–11:00. 24 hours. .2Mj. POST AND ASSOCIATES.

11. Clinical Medicine.—General medicine with special reference to diseases of the heart and blood vessels. Autumn, Winter, Spring, Tu., F., 10:00–11:00. 24 hours. .2Mj. HERRICK, KELLY, WOODRUFF, SIPPY.

12. Clinical Medicine.—General medicine with special reference to infectious diseases, diseases of the respiratory tract, and therapeutics. Winter, Tu., F., 9:00–10:00. 24 hours. .2Mj. IRONS, KELLY, BARTON.

13. Clinical Medicine.—General medicine with special reference to diseases of the alimentary tract. Each quarter. W., S., 10:00–11:00. 24 hours. .2Mj. BROWN, EYERLY.

14. Clinical Medicine.—General medicine with special reference to blood, liver, and spleen. Winter, W., S., 9:00–10:00. 24 hours. .2Mj. PERNOKIS.

15. Clinical Medicine.—General medicine. Summer, Tu., F., 9:00–10:00. 24 hours. .2Mj. RINDER.

16. Clinical Medicine.—General medicine with special reference to allergy and arthritis. Spring, W., S., 9:00–10:00. 24 hours. .2Mj. FORAN.

23. Medical Clinic.—A medical clinic at the Cook County Hospital, with special reference to chest diagnosis. Autumn, W., 7:00–9:00 P.M. 24 hours. .2Mj. GATEWOOD.

24. Clinical Medicine.—General medicine with special reference to infectious diseases. M., 7:00–9:00. 12 hours. .2Mj. Winter, ARKIN. General medicine with special reference to blood, liver, and spleen. Spring, M., 7:00–9:00. 12 hours. .2Mj. ARKIN.

25. A Clinical Course in Electrocardiography at Cook County Hospital.—Limited to 15. Summer, W., 11:00–1:00; Winter, W., 11:00–1:00. 24 hours. .2Mj. CARTER.

27. **Industrial Medicine.**—A clinical and conference course to illustrate the diseases and injuries peculiar to the industries, including preventive medicine. Limited to 12. F., 7:00–9:00 P.M. 24 hours. .2Mj. KESLER.

29. **Medical Clinic.**—The clinical significance of laboratory and roentgenological findings of the abdomen. Autumn, Winter, Spring, Tu., F., 10:00–11:00. 24 hours. .2Mj. PORTIS.

42. **Physiotherapy.**—A conference and practice course on the methods of physical therapy, including methods of reconstruction. Each quarter, Tu. and F., 9:00–11:00, 48 hours. .4Mj. Limited to 10. KOBAK.

50. **Clinical Clerkship in Presbyterian Hospital.**—6 weeks. 9:00–4:00 daily. 252 hours. 1.5Mjs. Limited to 20. Taken in combination with similar course in the Department of Surgery. The student works in the wards of the hospital under supervision of the staff of the hospital. His work includes taking of the history and the examination of the patient, the making of routine laboratory examinations, observation of the course of the disease, and study of the therapeutic methods employed.

Municipal Tuberculosis Sanitarium.—Given one morning a week. 9:00–12:00. Days to be announced. Methods of examination of the chest. Given in connection with Clerkship in Medicine.

50A. **Clinical Clerkship in Cook County Hospital.**—(Same as Course 50.)

50B. **Clinical Clerkship in Michael Reese Hospital.**—(Same as Course 50.) Limited to 6.

50C. **Clinical Clerkship in Washington Boulevard Hospital.**—(Same as Course 50.) Limited to 2.

53. **Materia Medica and Therapeutics.**—A lecture and conference course dealing with the physical, chemical, and pharmaceutical properties of medicinal agents, their toxicology and therapeutic application in the treatment of disease. Lectures and conferences. Autumn, Spring, Tu., F., 9:00–10:00. 24 hours. .4Mj. IRONS, GRAY.

53A. **Toxicology and Materia Medica.**—A lecture, conference, and laboratory course dealing with the practical work in toxicology and materia medica. Autumn, Spring, Tu., F., 9:00–11:00. 48 hours. .6Mj. MCNALLY AND MILLER.

59. **Immunology in Clinical Medicine.**—Winter. Tu., F., 4:00–5:00. 24 hours. .2Mj. DAVIDSOHN.

60. **Immunity and Infectious Diseases.**—A course of twenty-four lectures. Autumn, W., S., 9:00–10:00. 24 hours. .4Mj. DAVIDSOHN.

61. **Medical Jurisprudence, Hygiene and Preventive Medicine.**—A lecture course supplemented by recitations and conferences. Days to be arranged, 4:00–5:00. .4Mj. Winter, KOONTZ AND OTHERS.

62. **Clinical Phenomena.**—A lecture course presented by members of the Department of Medicine dealing with the physiology and significance of some major symptoms of disease. Among the subjects to be discussed are fever, anemia, icterus, menstruation, dyspnea, edema and convulsions, etc. Emphasis is placed upon the effects of these and other disturbances upon the general economy and efficiency of the body. Winter, Tu., F., 8:00–9:00. 24 hours. .4Mj. MEMBERS OF THE MEDICAL DEPARTMENT.

64. **Medical Economics and Preventive Medicine.**—A lecture course in medical economics and ethics. Hours to be announced. 12 hours. .1Mj. Autumn.

65. **General Review of the Clinical Branches.**—A conference and recitation course affording Senior students an opportunity to review the clinical branches and to coordinate their knowledge in preparation for examinations for license or for hospital internships and for practice of medicine. In sections limited to 30 each. 6 hours a week for each section. Summer, Autumn, Spring, Tu., W., Th., 4:00–6:00. .5Mj.

69. **Medical History and Medical Writing.**—A lecture course on the evolution of modern medicine and on the art of medical writing. 12 hours. .2Mj. Tu., 5:00–6:00. Autumn Quarter, FISHBEIN.

NERVOUS AND MENTAL DISEASES

OFFICERS OF INSTRUCTION

Peter Bassoe, M.D., Clinical Professor of Neurology.
George Washington Hall, A.M., M.D., Clinical Professor of Neurology.
John Favill, M.D., Clinical Professor of Neurology.
Harry Richard Hoffman, M.D., Associate Clinical Professor of Neurology.
Morris Braude, M.D., Associate Clinical Professor of Psychiatry.
Ralph C. Hamill, M.D., Associate Clinical Professor of Psychiatry.
David B. Rotman, M.D., Associate Clinical Professor of Psychiatry.
Loren William Avery, M.D., Associate Clinical Professor of Neurology.
Roy R. Grinker, M.D., Associate Clinical Professor of Neurology.
Richard Biddle Richter, M.D., Assistant Clinical Professor of Neurology.
William H. Haines, M.D., Assistant Clinical Professor of Neurology.
John M. Radzinski, M.D., Assistant Clinical Professor of Neurology.
Harry G. Hardt, M.D., Clinical Instructor in Neurology.
Yetta Scheftel, M.D., Clinical Instructor in Neurology.
Agnes Sharp, Ph.D. Clinical Instructor in Abnormal Psychology.
Edward I. Kelleher, M.D., Clinical Instructor in Psychiatry.
Mary Gritzner Schroeder, M.D., Clinical Associate in Psychiatry.
Theodora Wheeler, M.D., Clinical Associate in Neurology.
Alfred H. Stanton, M.D., Clinical Associate in Neurology.
Norman Levy, M.D., Clinical Associate in Psychiatry.
Julius Leva, M.D., Clinical Associate in Neurology.
W. Mary Stephens, M.D., Clinical Assistant in Neurology.
Alfred Paul Bay, M.D., Clinical Assistant in Neurology.
Samuel J. Beck, M.D., Clinical Assistant in Psychiatry.
W. J. Nolan, M.D., Clinical Assistant in Psychiatry.
Virginia M. Benson, M.D., Clinical Assistant in Neurology.
Jack Weinberg, M.D., Clinical Assistant in Neurology.
Josephine Chapin, M.D., Clinical Assistant in Psychiatry.
Ralph E. Talbot, M.D., Clinical Assistant in Neurology.
Ernest S. Klein, M.D., Clinical Assistant in Psychiatry.

NEUROLOGY

20. A Clinical and Conference Course at the Cook County Hospital.—W., S., 9:00–11:00. 48 hours. .4Mj. Winter, Avery.

21. Clinic at Rush Medical College.—M., Th., 9:00–11:00. 48 hours. .4Mj. Summer, Avery, Radzinski; Autumn, Hall, Avery; Winter, Favill, Radzinski; Spring, Bassoe, Hoffman.

22. Laboratory Work in Neuropathology.—Hours by arrangement. Credit according to amount and quality of work done. Throughout the year. Avery, Haines.

PSYCHIATRY

A. PRELIMINARY COURSE

43. Clinical and Conference Course in Central Free Dispensary.—Supplemented by visits to institutions. 24 hours. .2Mj. W., 4:00–6:00. Autumn, ROTMAN; Winter, HAMILL; Spring, ROTMAN.

B. ADVANCED COURSES. PREREQUISITE COURSE 43

44. Clinic at Cook County Psychopathic Hospital.—24 hours. .2Mj. M., 4:00–6:00. Autumn, Winter, BRAUDE; Spring, HAINES.

46. Ward Rounds at Cook County Psychopathic Hospital.—Limited to 10. 24 hours. .2Mj. W., 9:00–11:00. Throughout the year. HAMILL.

48. Special Work in Psychiatry, including Child Guidance, Psychometric Tests, and Criminology.—At Central Free Dispensary, supplemented by visits to Institute for Juvenile Research, Municipal Psychologic Laboratory, and prisons. Throughout the year by special arrangement. .2Mj. ROTMAN, HAMILL, HOFFMAN, SCHEFTEL.

ARENA CLINICS—RUSH MEDICAL COLLEGE

Days	Summer Quarter	Autumn Quarter	Winter Quarter	Spring Quarter
M., Th., 9:00–10:00	Metabolism V11-9	Metabolism V11-9	Metabolism V11-9	Metabolism V11-9
M., Th., 10:00–11:00		Cardio-vascular and Renal V11-10	Cardio-vascular and Renal V11-10	Cardio-vascular and Renal V11-10
Tu., F. 9:00–10:00	General Medicine V11-15	Therapeutics V11-53	Infectious Diseases V11-12	Therapeutics V11-53
Tu., F. 10:00–11:00		Heart V11-11	Heart V11-11	Heart V11-11
W., S. 9:00–10:00		Immunity V11–60	Diseases of Blood V11-14	Allergy and T.B. V11-16
W., S. 10:00–11:00	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13	Gastro-Intestinal V11-13

THE DEPARTMENT OF PEDIATRICS

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

Clifford Grosselle Grulee, Chairman of the Department of Pediatrics.

Clifford Grosselle Grulee, A.M., M.D., LL.D., Clinical Professor of Pediatrics.
Archibald Hoyne, S.B., M.D., Clinical Professor of Pediatrics.
Arthur Hawley Parmelee, M.D., Clinical Professor of Pediatrics.
Heyworth N. Sanford, M.D., Associate Clinical Professor of Pediatrics.
Eleanor I. Leslie, M.D., Associate Clinical Professor of Pediatrics.
Frank Wesley Allin, A.M., M.D., Assistant Clinical Professor of Pediatrics.
Charles Klaus Stulik, M.D., Assistant Clinical Professor of Pediatrics.
Bert I. Beverly, M.D., Assistant Clinical Professor of Pediatrics.
John Joseph Zavertnik, M.D., Clinical Instructor in Pediatrics.
Craig D. Butler, M.D., Clinical Instructor in Pediatrics.
Jennie Kantor-Amtman, M.D., Clinical Instructor in Pediatrics.
Matthew Lewison, M.D., Clinical Instructor in Pediatrics.
Harold Noyes, M.D., Clinical Instructor in Pediatrics.
Noel Garnet Shaw, M.D., Clinical Instructor in Pediatrics.
Florence M. Meader-Rees, M.D., Clinical Instructor in Pediatrics.
C. Jack Harrison, M.D., Clinical Instructor in Pediatrics.
Norman T. Welford, M.D., Clinical Assistant in Pediatrics.
Anna E. Boller, Ph.B., Clinical Assistant in Pediatrics (Dietetics).
Raymond F. Grissom, M.D., Clinical Assistant in Pediatrics.
Walter Siemsen, M.D., Clinical Assistant in Pediatrics.
Anne Bohning, M.D., Clinical Assistant in Pediatrics.

COURSES OF INSTRUCTION

1. **Principles of Pediatrics.**—A conference and recitation course comprising the anatomy, physiology, and hygiene of infancy and childhood, and the dietetics of infancy and childhood. Required. Autumn, Sat., 8:00–9:00. Lewison and Associates.

2. **Lecture on Preventive Measures.**—Conference and recitation course. Required. 6 weeks. Every quarter. Th., 11:00–12:00. (To be taken in connection with Course 4.) Sanford.

3. **Conference.**—Required. Throughout the year. M., 11:00–12:00. 6 weeks. Each quarter. Summer, Parmelee; Autumn, Winter, Spring, Grulee.

4. **Contagious Disease.**—A conference and recitation course on contagious diseases. No limit in attendance. Elective. F., 8:00–9:00. Once a week for six weeks. Autumn, Spring, Hoyne.

4B. **Clinic in Contagious Diseases.**—Clinic in Contagious Department of Cook County Hospital. Required. Limited to 12. 2 hours a week for 6 weeks. Sat., 11:00–1:00, Autumn, Winter, Spring, Hoyne, Shaw; Th., 9:30–11:00, Summer, Shaw.

4C. **Clerkship.**—Municipal Contagious Hospital. 1 week. Required. Grissom.

7. **Dispensary.**—A course in the Central Free Dispensary. Required. 4 days a week for 6 weeks. Each quarter. 9:30–11:00 daily. Harrison.

12. **Pediatric Clinic.**—A clinic and conference course. Elective. Tu., F., 9:00–10:00. Summer, Leslie; Autumn, Winter, Spring, Grulee.

13. Pediatric Clinic.—A clinic and conference course. Elective. M., Th., 9:00–10:00. Summer, ———; Autumn, Winter, Spring, PARMELEE.

14. Pediatric Clinic.—A clinic and conference course. Elective. W., 9:00–10:00. Every quarter. SANFORD.

14A. Pediatric Clinic.—Psychology problems of childhood. Elective. Sat., 9:00–10:00. Every quarter. BEVERLY.

15. Nutrition Clinic.—A clinical and conference course at the Central Free Dispensary. Required. 6 weeks. M., W., Th., 1:00–3:00. Each quarter. LEWISON.

15A. Nutrition Clinic.—The feeding and care of children (two to six years of age). Required. 6 weeks. M., W., Th., 1:00–3:00. Each quarter. LEWISON.

15B. Nutrition Clinic.—The feeding and care of older children (six to sixteen years of age). Required. 6 weeks. Sat., 9:00–11:00. ALLIN.

15C. Conference on Nutrition of Older Children including Diets and Preparation of Foods.—W., 8:00–9:00. ALLIN, BOLLER.

16. Pediatric Clinic at the Cook County Hospital.—A clinic and conference course at the Cook County Hospital. Elective. Tu., 7:00–9:00 P.M. Autumn, Winter, Spring, STULIK.

17. Clinic on New-born Infants.—A clinical demonstration course at Cook County Hospital dealing with normal new-born infants, the diseases of the new-born, the premature infant, and the care and management of the new-born. Elective. Limited to 10. Sat., 8:00–9:00 A.M. Autumn, Winter, Spring, PARMELEE, BUTLER.

18. Nutrition.—Class in food value. Lecture and laboratory course with practical experience in normal and therapeutic diets. Elective. W., 4:00–6:00. BOLLER.

19. Student Assistant in Serology and Therapeutics of Syphilis in Children.—Practical work in intravenous and intramuscular injections of arsenical, bismuth, and mercurial preparations; history taking and methods of drawing blood for Wassermann test. Tu., 2:00–4:00. Throughout the quarter. .2Mj. Each quarter. SHAW.

19A. Course in Serology and Therapeutics of Syphilis in Children.—General instruction in the treatment of syphilis in children, with special emphasis on history taking and diagnosis. Observation of, and limited participation in, the treatment procedure. S., 2:00–4:00. 6 weeks. .2Mj. Each quarter. SHAW.

20. Behavior Clinic.—Required. 6 weeks. Tu., 11:00–1:00. Every quarter. BEVERLY, WELFORD.

21. Posture Clinic.—Required. 6 weeks. S., 9:00–11:00. Every quarter. LEWISON.

23. Clinic on Preventive Measures in Childhood.—Required. 6 weeks. F., 9:00–11:00. Every quarter. MEADER-REES, HARRISON.

24. Cook County Clinic.—Required. 6 weeks. Tu., F., 2:00–4:00. MEMBERS OF THE PEDIATRIC FACULTY ON THE COOK COUNTY STAFF.

25. Out-Patient New-born Service.—In association with Obstetrics and Gynecology, Course 5. Required. 6 weeks. Every quarter.

26. X-Ray Demonstration.—Required. 6 weeks. W., 8:00–9:00. SQUIRE.

27. Dental Hygiene.—3 weeks. Required. M., 8:00–9:00. NOYES.

28. General Clinic.—Presbyterian Hospital (for dispensary and hospital clerks only). W., 11:00–12:00. Required. STULIK.

29. General Clinic.—Presbyterian Hospital (for dispensary and hospital clerks only). W., 11:00–12:00. (3 clinics each term.) SANFORD.

30. Lectures on Diseases of Children.—(For dispensary and hospital clerks only). M., Tu., W., Th., F., 9:00–9:30. MEMBERS OF PEDIATRIC FACULTY.

31. Lectures on Pathology of Disease in Children.—For dispensary and hospital clerks only. F., 12:00–1:00, APFELBACH.

32. Clinic on Heart Disease in Children.—For dispensary and hospital clerks only. F., 11:00–12:00, SIEMSEN, BOHNING.

50. Clinical Clerkship in Presbyterian and Cook County Hospitals.—2:00–4:00. 2 days a week for 6 weeks. 1.5Mjs. Limited to 20. Taken in combination with similar course in the Department of Obstetrics and Gynecology. Required.

DEPARTMENT OF PEDIATRICS

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00 – 9:00	Noyes, 27		15 C Allin, Boller		26 Squire	
9:00 – 9:30	Lect. 30	Lect. 30	Lect. 30	Lect. 30	Lect. 30	Disp. 7 Nutrition, Allin; Posture, Lewison
11:00	Disp. 7	Disp. 7	Disp. 7	Disp. 7	Disp. 7	
11:00 – 12:00	Grulee, 3	Beverly	28 Stulik Sanford 29	Sanford, 2	32 Siemsen	Hoyne, Kantor-Amtman C.C.H.
12:00 – 1:00		Course 20			Path., Apfelbach	
2:00 – 4:00	15 and 15A Hosp. 50 Clerk.	County Clinic 24 Hosp. 50 Clerk.	15 and 15A Hosp. 50 Clerk.	15 and 15A Hosp. 50 Clerk.	County Clinic 24 Hosp. 50 Clerk.	Shaw, 19A 20% Hosp. 50 Clerk.

* Throughout the quarter.
A. Municipal Contagious Hospital. —Course 4C—1 week
B. Outpatient, New-Born —Course 25 (during Obst. Clerk.)
B. Kantor-Amtman, 9–11. Cook County Contagious Hospital.

THE DEPARTMENT OF SURGERY
RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

VERNON CYRENIUS DAVID, Chairman of the Department of Surgery.

ARTHUR DEAN BEVAN, A.M., M.D., Nicholas Senn Clinical Professor of Surgery.*
VERNON CYRENIUS DAVID, A.B., M.D., Clinical Professor of Surgery.
KELLOGG SPEED, S.B. M.D., Clinical Professor of Surgery.
ROBERT HARRY HERBST, M.D., Clinical Professor of Surgery (Genito-urinary).
HERMAN LOUIS KRETSCHMER, M.D., Clinical Professor of Surgery (Genito-urinary).
CARL BRADEN DAVIS, S.B., M.D., Clinical Professor of Surgery.
FREDERICK BROWN MOOREHEAD, S.M., D.D.S., M.D., Clinical Professor of Surgery (Oral and Dental).
ISABELLA COLER HERB, M.D., Clinical Professor of Surgery (Anesthetics).
ALBERT HORR MONTGOMERY, M.D., Clinical Professor of Surgery.
EDWIN MORTON MILLER, M.D., Clinical Professor of Surgery.
GEORGE GILBERT DAVIS, M.D., Associate Clinical Professor of Surgery.
ROGER THROOP VAUGHAN, M.D., Associate Clinical Professor of Surgery.
RALPH B. BETTMAN, A.B., M.D., Associate Clinical Professor of Surgery.
ELVEN JAMES BERKHEISER, M.D., Associate Clinical Professor of Surgery (Orthopedic).
ARTHUR R. METZ, M.D., Associate Clinical Professor of Surgery.
MARY M. LYONS, M.D., Associate Clinical Professor of Surgery (Anesthetics).
FRANCIS HOWE STRAUS, M.D., Associate Clinical Professor of Surgery.
HARRY ALVIN OBERHELMAN, M.D., Associate Clinical Professor of Surgery.
FAY HUFFMAN SQUIRE, M.D., Associate Clinical Professor of Surgery (Radiology).
WILLIS J. POTTS, M.D., Associate Clinical Professor of Surgery.
ADRIEN VERBRUGGHEN, M.D., Associate Clinical Professor of Surgery (Neuro-Surgery).
CHARLES GRAFTON WELLER, M.D., Associate Clinical Professor of Surgery (Genito-urinary).
EDWARD L. COMPERE, M.D., Associate Clinical Professor of Surgery.
EDWARD BUCKMAN, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).
DAVID C. STRAUS, M.D., Assistant Clinical Professor of Surgery.
THOMAS COTTRELL, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).
HILLIER L. BAKER, M.D., Assistant Clinical Professor of Surgery.
ANDREW J. SULLIVAN, S.B., M.D., Assistant Clinical Professor of Surgery (Genito-urinary).
KAY L. THOMPSON, D.D.S., Assistant Clinical Professor of Surgery (Oral).
CHARLES DUSTIN PARKER, M.D., Assistant Clinical Professor of Surgery (Genito-urinary).
FRANK VICTOR THEIS, M.D., Assistant Clinical Professor of Surgery.

* The Nicholas Senn Professorship was founded in 1898 by the late Professor Nicholas Senn, with a gift to the College of $25,000 for the promotion of higher medical education and the advancement of medical science. He was Professor of the Principles of Surgery in Rush Medical College from 1889 to 1891 and Professor of Surgery from 1891 to 1908.

Stanley E. Lawton, M.D., Assistant Clinical Professor of Surgery.
Merrill H. Killip, D.D.S., Clinical Instructor in Surgery (Oral).
Nora B. Brandenburg, M.D., Clinical Instructor in Surgery (Anesthetist).
Randolph Olmsted, M.D., Clinical Instructor in Surgery (Oral).
Norris J. Heckel, M.D., Clinical Instructor in Surgery (Genito-urinary).
Fred Shapiro, M.D., Clinical Instructor in Surgery (Orthopedic).
Dean L. Rider, M.D., Clinical Instructor in Surgery.
James Wesley Merricks, Jr., M.D., Clinical Instructor in Surgery (Genito-urinary).
Arthur E. Diggs, M.D., Clinical Associate in Surgery.
James F. De Pree, M.D., Clinical Associate in Surgery.
Monroe Garrison, M.D., Clinical Associate in Surgery (Orthopedic).
Egbert H. Fell, M.D., Clinical Associate in Surgery.
Raymond Householder, M.D., Clinical Associate in Surgery.
Louis Stephen Varzino, M.D., Clinical Associate in Surgery (Orthopedic).
Richard K. Gilchrist, M.D., Clinical Associate in Surgery.
A. Louis Rosi, M.D., Clinical Associate in Surgery.
John Olwin, M.D., Clinical Associate in Surgery.
Joseph E. Allegretti, S.B., R.Ph., M.D., Clinical Assistant in Surgery.
Clarence W. Monroe, M.D., Clinical Associate in Surgery.
Arthur Schwarcz, M.D., Clinical Assistant in Surgery (Genito-urinary).
Louis F. Plzak, M.D., Clinical Assistant in Surgery.
George L. Perusse, M.D., Clinical Assistant in Surgery.
Leonard J. Sherwin, D.D.S., Clinical Assistant in Surgery (Oral).
Euripides Nittis, M.D., Clinical Assistant in Surgery.
Anton Fehr, M.D., Clinical Assistant in Surgery.
John M. Dorsey, M.D., Clinical Assistant in Surgery.
Stephen A. Zieman, M.D., Clinical Assistant in Surgery.
Arland Seth Romberger, M.D., Clinical Assistant in Surgery (Genito-urinary).
Kempton L. German, M.D., Clinical Assistant in Surgery (Genito-urinary).
Irving J. King, M.D., Clinical Assistant in Surgery (Orthopedic).
Oliver A. Kobisk, M.D., Clinical Assistant in Surgery (Genito-urinary).
Reuben B. Gaines, M.D., Clinical Assistant in Surgery (Genito-Urinary).
Francis M. Lyle, M.D., Thomson-Bevan Fellow in Surgery; House Surgeon, Presbyterian Hospital.
William E. Looby, M.D., Clinical Assistant in Surgery.
Russell C. Hanselman, M.D., Francis A. Hardy Fellow; House Surgeon, Presbyterian Hospital.

INTRODUCTORY

A total of 4 majors in surgery is required. The following courses are specifically required: 1, 3, 5, 30, 33, 34 and 50; also, the student must take clinics covering head, neck and thorax, abdomen, and extremities.

DEBOTH LECTURESHIP IN SURGERY

A lectureship established by Miss Jessie M. DeBoth in memory of her brother, Edward Raymond DeBoth, provides for an annual lecture on some surgical topic.

COURSES OF INSTRUCTION

1. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., Tu., Th., 11:00–12:00. 36 hours. .4Mj. Autumn, OBERHELMAN, POTTS.

3. Surgical Anatomy and Operative Surgery on the Cadaver.—A demonstration and operative course. Sec. *a*, M., Th., 11:00–1:00; sec. *b*, Tu., F., 11:00–1:00. 48 hours. .3Mj. Autumn, Spring, MILLER, MONTGOMERY, BAKER, VERBRUGGHEN, STRAUS, GILCHRIST.

4. Genito-urinary Surgery.—A recitation and conference course for Juniors, given to the class in sections. 24 hours. .4Mj. Spring, W., 4:00–6:00, BUCKMAN.

5. Clinical Surgery (Central Free Dispensary).—Including bandaging, surgical dressings, and surgical appliances. This course may be elected by Junior students after one quarter's residence in the clinical years during which other courses in surgery have been taken. Daily, 11:00–1:00. 48 hours. .3Mj. Each quarter throughout the year. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat. Each section limited to 12 students. POTTS, LAWTON, THEIS, RIDER, PERUSSE, DIGGS, FEHR, NITTIS, ZIEMAN, GILCHRIST, DORSEY, ROSI, FELL, OLWIN.

6. Clinical Surgery.—A clinical and conference course in general surgery and extremities, including fractures, with special reference to, and examination in, the surgery of the head, neck, and thorax. This course includes instruction in the administration of anesthetics. M. and Th., Tu. and F., 11:00–12:00. 24, 36, or 48 hours. .2, .3, or .4Mj. Autumn, SPEED, DAVID, DAVIS.

7. Surgical Physiology.—A conference and demonstration course in physiology and biochemistry as applied to clinical surgery. 12 hours. .1Mj. Winter, Tu., 12:00–1:00, STRAUS.

8. Clinical Surgery.—A clinical and conference course in abdominal surgery and surgery of the head, neck, and thorax. M. and Th., Tu. and F., 11:00–12:00. 24, 36, 48 hours. .2, .3, or .4Mj. Winter, DAVID, MONTGOMERY, MILLER.

10. Clinical Surgery.—A clinical conference course in abdominal, thoracic, and general surgery, fractures, neuro-surgery, and oral surgery, which includes instruction in the administration of anesthetics. 11:00–12:00. 24, 36, or 48 hours. .2, .3, or .4Mj. Spring, M., VERBRUGGHEN, neuro-surgery; MOOREHEAD, oral surgery; BETTMAN, Thoracic Surgery; Th., SPEED, fractures; Tu., DAVID, abdominal surgery; F., STRAUS, general surgery.

12. Clinical Surgery.—A clinical and conference course in general surgery. M. and Th., Tu. and F., 11:00–12:00. 24, 36, or 48 hours. .2, .3, or .4Mj. Summer, STRAUS, OBERHELMAN, POTTS, LAWTON.

13. Laboratory and research work may be elected by a limited number of students in the laboratories of surgical pathology, and credit in proportion to the character and length of course may be granted, but not to exceed .4Mj. in any one quarter. DORSEY ROSI, GILCHRIST, FELL.

14. Bone and Joint Surgery.—A clinical course at the Central Free Dispensary. .3Mj. Summer, Autumn, Winter, Spring. 48 hours. Sec. *a*, M., Th., 2:00–4:00; sec. *b*, Tu., F., 2:00–4:00; sec. *c*, W., Sat., 2:00–4:00. SPEED, PARKER, BERKHEISER, RIDER, VARZINO, GARRISON.

15. Surgical Diagnosis at the Presbyterian Hospital.—Class limited to 10. Spring. Tu., 11:00–12:00. 12 hours. .2Mj. SPEED.

16. Practical Course in Operative Surgery on Animals.—Given by special arrangement.

17. Genito-urinary Diseases (Central Free Dispensary).—A clinical and conference course in diseases of the genito-urinary tract. Sec. *a*, M., Th.; sec. *b*, Tu., F., sec. *c*, W., Sat., 4:00–6:00. 48 hours. .2Mj. Summer, Autumn, Winter, Spring, HERBST, KRETSCHMER, COTTRELL, BUCKMAN, SULLIVAN.

18. Clinical Course at the Cook County Hospital.—Topic: Thoracic surgery. Th., 2:00–4:00. 24 hours. .2Mj. Autumn, Spring, BETTMAN.

20. **Clinical Course at the Cook County Hospital.**—Topic: general surgery. Class limited to 10 students. F., 11:00–1:00. 24 hours. .2Mj. Autumn, Spring, MONTGOMERY; Winter, G. G. DAVIS.

22. **Surgical Clinic at the Cook County Hospital.**—Acute abdominal surgical emergencies. Diagnosis and management. Case histories read. Cases demonstrated and followed to operation. Suitable cases fluoroscoped before class. Class limited to 10. Tu., 7:00–9:00 P.M. 24 hours. Each quarter. VAUGHAN.

23. **Clinical Course at the Cook County Hospital.**—Topic: general surgery, with special reference to spinal column and cord. Brain Surgery, W., 4:00–6:00. 24 hours. .2Mj. Autumn.

24. **Clinical Course at Washington Boulevard Hospital.**—Industrial and traumatic surgery, with X-ray interpretation. M., 7:00–9:00 P.M. 24 hours. .2Mj. Autumn, Winter, METZ, HOUSEHOLDER.

25. **Orthopodic Clinic at the Cook County Hospital.**—Clinical course, with special reference to the orthopedic affections of adults. M., Th., 2:00–4:00. 48 hours. .4Mj. Each quarter. BERKHEISER.

27. **Clinical Course at the Cook County Hospital.**—Class limited to 10. Autumn, Winter, Spring, W., 11:00–1:00. 24 hours. .2Mj.

28. **Clinical Course at the Cook County Hospital.**—Class limited to 10. Autumn, Winter, Spring, M., 7:00–9:00 P.M. 24 hours. .2Mj. MILLER.

30. **Anesthetics.**—A conference and demonstration course on the administration of anesthetics. Autumn, Winter, F., Spring, Sat., 12:00–1:00. .1Mj. HERB.

33. **Roentgenology.**—A conference and demonstration course on the use of the X ray in diagnosis and treatment, and on the general principles of radiographic technique. M., Th., 12:00–1:00. .4Mj. Winter, Spring, SQUIRE.

34. **Genito-urinary Surgery.**—A clinical and conference course in diseases of the genito-urinary tract. Tu., 12:00–1:00. 24 hours. .2Mj. Autumn, Spring, HERBST, KRETSCHMER.

35. **Orthopedic Lecture.**—A lecture course on bone and joints. Spring, Tu., F., 4:00–5:00. .4Mj. BERKHEISER.

50. **Clinical Clerkship in Presbyterian Hospital.**—6 weeks. 9:00–4:00 daily. 252 hours. 1.5Mj. Limited to 20. Taken in combination with similar course in the Department of Medicine. The student works in the wards of the hospital under supervision of the staff of the hospital. His work includes taking of the history and the examination of the patient, the making of routine laboratory examinations, observations of the course of the disease and of such operations as may be necessary, and study of other therapeutic methods employed.

50A. **Clinical Clerkship in Cook County Hospital.**—(Same as Course 50.)

50B. **Clinical Clerkship in Michael Reese Hospital.**—(Same as Course 50.) Limited to 6.

50C. **Clinical Clerkship in Washington Boulevard Hospital.**—(Same as Course 50.) Limited to 2

THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

NOBLE SPROAT HEANEY, Chairman of the Department of Obstetrics and Gynecology.

JOHN CLARENCE WEBSTER, M.D., F.R.C.P. (Edin.), Sc.D., LL.D., Professor Emeritus of Obstetrics and Gynecology.

RUDOLPH WEISER HOLMES, M.D., Professor Emeritus of Obstetrics and Gynecology.

NOBLE SPROAT HEANEY, A.B., M.D., Clinical Professor of Obstetrics and Gynecology.

CAREY CULBERTSON, A.B., M.D., Clinical Professor of Obstetrics and Gynecology.

JOSEPH LOUIS BAER, S.M., M.D., Clinical Professor of Obstetrics and Gynecology.

AARON ELIAS KANTER, S.M., M.D., Clinical Professor of Obstetrics and Gynecology.

EDWARD DUDLEY ALLEN, S.B., M.D., Associate Clinical Professor of Obstetrics and Gynecology.

PAUL CHRISTOPHER FOX, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

ARTHUR HERMAN KLAWANS, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

FRED O. PRIEST, M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

ALICE MCNEAL, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology (Anesthetics).

HARRY BOYSEN, M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

ALEXANDER GAREGIN GABRIELIANZ, M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

DOROTHY EDWARDS, S.B., M.D., Assistant Clinical Professor of Obstetrics and Gynecology.

BENJAMIN W. BREISTER, M.D., Clinical Instructor in Obstetrics and Gynecology.

M. H. BOLEY, M.D., Clinical Instructor in Obstetrics and Gynecology.

EDWIN J. DE COSTA, M.D., Clinical Instructor in Obstetrics and Gynecology.

LINCOLN STULIK, M.D., Clinical Instructor in Obstetrics and Gynecology.

CECIL C. DRAA, M.D., Clinical Instructor in Obstetrics and Gynecology.

HUGO C. BAUM, M.D., Clinical Associate in Obstetrics and Gynecology.

IAN H. BOND, M.D., Clinical Associate in Obstetrics and Gynecology.

LOUIS MCRAE, M.D., Clinical Associate in Obstetrics and Gynecology.

W. J. NIXON DAVIS, JR., M.D., Clinical Associate in Obstetrics and Gynecology.

S. J. TURNER, M.D., Clinical Associate in Obstetrics and Gynecology.

ROBERT LAEMLE, M.D., Clinical Associate in Obstetrics and Gynecology.

CATHERINE L. DOBSON, M.D., Clinical Assistant in Obstetrics and Gynecology.

GEORGE H. SEHRING, M.D., Clinical Assistant in Obstetrics and Gynecology.

INTRODUCTORY

The subjects of obstetrics and gynecology are taught in the Junior and Senior years in recitation, and conference courses in dispensary and hospital clinics, and in the conduct of labor in the homes of patients. The total requirement is 2.6Mjs.

COURSES OF INSTRUCTION

1. Conference and Demonstration Course in Obstetrics and Gynecology.—The female pelvis and genitalia, puberty and menstruation, anatomy, physiology, the diagnosis of pregnancy, management of normal pregnancy, physiology and clinical course of normal labor, and the puerperium, mechanism in vertex presentation. Mechanism in face, brow, pelvic, and shoulder presentations, the new-born child, multiple pregnancy, obstetric operations and manipulations, induced termination of pregnancy. Forceps, version, operations for enlarging the pelvic diameters, caesarean section, embryotomy, manikin demonstrations, pathology of pregnancy, the toxemias, ectopic gestation, premature expulsion and diseases of ovum, pathology of labor, anomalies of expellent forces, soft passages, bony pelvis and fetus, the hemorrhages, injuries of birth canal, prolapse of cord, pathology of puerperium, diseases and abnormalities, sepsis. Required. Autumn, M., Tu., F., Sat., 12:00–1:00. .8Mj. Baer, Fox, Klawans, Boysen.

3. Conference Courses in Gynecology.—Gross anatomy of the internal and external genitalia; menstruation and its disorders; history-taking; symptoms in gynecology; methods of examination; anomalies of the genital tract; malpositions of the uterus; acute and chronic infections of the internal and external genitalia; new growths of the uterus, tubes, and ovaries. 24 hours. .4Mj. Gynecology. Autumn, F., Sat., 11:00–12:00, Kanter, Allen, Baer, Klawans, Fox.

6. Conference and Demonstration Course.—A gross and microscopic study of the female genitalia, both normal and pathologic, including the changes found in menstruation and in pregnancy. Limited to 15. Each quarter, W., Sat., 11:00–1:00. 48 hours. .4Mj. (Obstetrics .2Mj.; Gynecology .2Mj.). Culbertson, Kanter, Allen, Priest, McNeal, Dobson.

9. Clinic.—Gynecology and Obstetrics. Prerequisite: course 1 or 6. 24 hours. .2Mj. (Obstetrics .1Mj.; Gynecology .1Mj.). Summer, Autumn, Winter, W., Sat., 11:00–12:00; Spring, W., Sat., 12:00–1:00, Heaney, Kanter, Allen, Priest.

10A. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 15. M., Th., 11:00–12:00. 24 hours. .2Mj. Gynecology. Autumn, Spring, Kanter.

12. Special Laboratory Work.—For a limited number of students selected by the Department staff.

50. Clinical Clerkship in Presbyterian Hospital.—6 weeks. Students to be on call full 24-hour period. Taken in combination with similar course in the Department of Pediatrics. The student works in the wards of the hospital under supervision of the staff of the hospital. His work includes the taking of histories, the examination of patients, the making of routine laboratory examinations, and observation of the course of disease and of such operations as may be necessary, and study of other therapeutic methods employed. Attendance upon cases of confinement in the Hospital and at the homes of patients is required. Students will be summoned to cases at the time of delivery and under supervision will attend the patients during and after delivery. Clinical records must be kept by students and certificates obtained. Each quarter. Limited to 20. 1.5Mjs. Kanter, Allen, Priest, Klawans, Boysen, Draa, McRae. Nurse: Mabel W. Hubbard.

THE DEPARTMENT OF LARYNGOLOGY AND OTOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

George E. Shambaugh, Jr., Chairman of the Department of Laryngology and Otology.

George Elmer Shambaugh, Ph.B., M.D., Clinical Professor Emeritus of Laryngology and Otology.

Daniel Bernard Hayden, A.M., M.D., Clinical Professor of Laryngology and Otology.

Elmer Lawton Kenyon, A.B., M.D., Associate Clinical Professor Emeritus of Laryngology and Otology (Disorders of Speech).

Thomas Williams Lewis, S.B., M.D., Associate Clinical Professor Emeritus of Laryngology and Otology.

Louis T. Curry, S.B., M.D., Associate Clinical Professor of Laryngology and Otology.

George E. Shambaugh, Jr., A.B., M.D., Associate Clinical Professor of Laryngology and Otology.

Richard W. Watkins, S.B., M.D., Assistant Clinical Professor of Laryngology and Otology.

Edward L. Chainski, M.D., Assistant Clinical Professor of Laryngology and Otology.

Clifford L. Dougherty, M.D., Assistant Clinical Professor of Laryngology and Otology.

Linden J. Wallner, M.D., Assistant Clinical Professor of Laryngology and Otology.

Frank Wojniak, M.D., Assistant Clinical Professor of Laryngology and Otology.

Paul A. Campbell, M.D., Clinical Instructor in Laryngology and Otology.

Gordon H. Scott, M.D., Clinical Instructor in Laryngology and Otology.

Effie M. Ecklund, M.D., Clinical Assistant in Laryngology and Otology.

Eva Line, M.D., Clinical Assistant in Laryngology and Otology (Anesthetist).

Kurt Springer, M.D., Resident in Laryngology and Otology, Presbyterian Hospital, July 1, 1940, to December 31, 1940.

SUBDIVISION FOR BRONCHOSCOPY AND OESOPHAGOSCOPY

Elmer William Hagens, M.D., Clinical Professor of Laryngology and Otology.

Stanton Abeles Friedberg, M.D., Clinical Instructor in Laryngology and Otology.

INTRODUCTORY

UNDERGRADUATE INSTRUCTION

The required work in the Department consists of Courses 1 and 2. The work in this Department aims to provide for undergraduate students such practical training as should fit them to make the ordinary examinations required in the general study of

patients and the opportunity to gain some knowledge of the clinical problems which the specialist in otolaryngology has to meet.

COURSES OF INSTRUCTION

1. **Nose, Throat, and Ear.**—Conference and quiz course. M., Th., 4:00–5:00. .4 Mj. Winter. Nose and throat, 16 hours; ear, 8 hours. SHAMBAUGH, JR., WATKINS, HAGENS.

2. **Nose, Throat, and Ear.**—Clinical and practical course in the Dispensary. Technical examination of the normal and commoner pathological conditions of the nose, throat, and ear; also intubation. Sections limited to 12. Each quarter. .4 Mj. 2:00–4:00. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat.

THE DEPARTMENT OF OPHTHALMOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

William Franklin Moncreiff, Chairman of the Department of Ophthalmology.

William Franklin Moncreiff, S.M., M.D., Clinical Professor of Ophthalmology.
Charles Gilchrist Darling, M.D., Clinical Professor of Ophthalmology.
Thomas Dyer Allen, M.D., Associate Clinical Professor of Ophthalmology.
Earle Bloodgood Fowler, M.D., Associate Clinical Professor of Ophthalmology.
Robert von der Heydt, M.D., Associate Clinical Professor of Ophthalmology.
Bertha Klien, M.D., Associate Professor of Ophthalmology.
Elias Selinger, M.D., Assistant Clinical Professor of Ophthalmology.
Max M. Jacobson, M.D., Assistant Clinical Professor of Ophthalmology.
Vernon Mayne Leech, M.D., Clinical Instructor in Ophthalmology.
Cyril V. Crane, M.D., Clinical Associate in Ophthalmology.
Raymond F. Carmody, M.D., Clinical Associate in Ophthalmology.
Karl J. Scheribel, M.D., Clinical Associate in Ophthalmology.
Frank C. Sternes, M.D., Clinical Assistant in Ophthalmology.

INTRODUCTORY

A total of 1 Mj. in ophthalmology is required for graduation.

The courses for undergraduate students are designed to present an adequate view of the scope of modern ophthalmology, and to stress especially its relationships to other fields of medicine, particularly neurology and internal medicine. The usual methods of external examination and ophthalmoscopy are taught, but no instruction is given to undergraduates in the technic of refraction procedures or surgical operations.

A comprehensive didactic course (*a*), with demonstration and projection material, is given by preference in advance of the clinical and laboratory course (*b*), in which latter course the attempt is constantly made to correlate clinical phenomena with demonstrable pathologic, especially histologic, changes, making use of the constantly growing collection of histological material in the Department.

Extramural clinical courses are offered as electives for those undergraduates who wish further opportunity for the study of clinical material.

COURSES OF INSTRUCTION

UNDERGRADUATE COURSES

1. Didactic and Demonstration Course.—Required. 24 hours. .4Mj. M., Th., 5:00–6:00. Winter.

2. Clinical and Laboratory Course.—Required. Each quarter. Each section limited to 18. Each student must provide himself with an ophthalmoscope and a condensing lens. 48 hours. .6Mj. Sec. *a*, M., Th., 2:00–4:00; sec. *b*, Tu., F., 2:00–4:00; sec. *c*, W., Sat., 2:00–4:00.

3. Clinical Courses at the Cook County Hospital.—Elective. Prerequisite: Courses 1 and 2. Each quarter. Each section limited to 10. 24 hours. .2Mj.

4. Clinical Course at the Illinois Charitable Eye and Ear Infirmary.—Elective. Prerequisite: Courses 1 and 2. Autumn, Winter, Spring. Each section limited to 10. 24 hours. .2Mj.

THE DEPARTMENT OF DERMATOLOGY

RUSH MEDICAL COLLEGE

OFFICERS OF INSTRUCTION

Oliver Samuel Ormsby, Chairman of the Department of Dermatology.

Oliver Samuel Ormsby, M.D., Clinical Professor of Dermatology.
Edward Allen Oliver, M.D., Associate Clinical Professor of Dermatology.
James Herbert Mitchell, M.D., Associate Clinical Professor of Dermatology.
Clark Wylie Finnerud, M.D., Assistant Clinical Professor of Dermatology.
Michael Higgins Ebert, M.D., Assistant Clinical Professor of Dermatology.
Marion Shelley Fink, M.D., Clinical Instructor in Dermatology.
Walter William Tobin, M.D., Clinical Instructor in Dermatology.
James Randolph Webster, M.D., Clinical Instructor in Dermatology.
Edward A. Skolnik, M.D., Clinical Associate in Dermatology, Director of Syphilis Clinic.
Frank J. Kendrick, M.D., Clinical Associate in Dermatology.
David V. Omens, M.D., Clinical Associate in Dermatology.
Albert H. Slepyan, M.D., Clinical Assistant in Dermatology.
Vera Leaf, M.D., Clinical Assistant in Dermatology.
Harold Omens, M.D., Clinical Assistant in Dermatology.

INTRODUCTORY

A total of 1 Mj. in dermatology is required for graduation. Instruction by clinical teaching, including recitations and demonstrations to small classes of clinical, bacteriologic, and pathologic phenomena, is given in the College, the Dispensary, and the Cook County Hospital.

Instruction in this Department is supplemented by ample use of the large collection of dermatological plates, atlases, and photographs, also by the use of the Baretta Models.

COURSES OF INSTRUCTION

1. Dermatology and Syphilis.—A recitation and conference course given to the class in sections not exceeding 25. Tu., F., 4:00–5:00. 24 hours. .4Mj. Spring, Mitchell, Ebert, Tobin.

2. Clinical Courses.—A clinical course on the subject of dermatology and syphilis. The clinic has been conducted in the College for many years and is attended by a large number of out-patients of both sexes and all ages. Each quarter throughout the year. Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn, Oliver; Winter, Mitchell; Spring, Ormsby.

3. Clinical Course in the Central Free Dispensary.—A clinical course given to the class in small sections in the departments of dermatology and syphilis in the Central Free Dispensary. The student is here brought in personal contact with patients and required to examine and prescribe for them as in private practice. Limited to 10 in each section. Each term throughout the year, 2:00–4:00. 24 hours. .2Mj. Sec. *a*, M., Th., Autumn, Spring, Finnerud; Winter, Tobin; Summer, Fink; sec. *c*, W., S., Autumn, Spring, Webster; Winter, Oliver.

4. Student Assistant in the Dispensary.—Provision is made for 3 students to assist in the Dispensary each quarter, one M. and Th., one Tu. and F., and one W. and Sat. 48 hours. .4Mj.

4A. Course in Syphilis.—Work as student assistant in the Evening Clinic in the Central Free Dispensary. Opportunity is afforded for special training in the methods of diagnosis and treatment of syphilis. Prerequisite: Course 1. Limited to 2. Each quarter, F., 7:00–9:00. .2Mj. OLIVER.

5. Syphilis.—A clinical and lecture course comprising a general survey of the subject of syphilis. F., 4:00. 12 hours. .2Mj. Autumn, Spring, EBERT.

5A. Cook County Hospital Clinics.—A clinic and conference course at the Cook County Hospital on diseases of the skin and syphilis. Each quarter. M., 2:00–4:00. .2Mj. EBERT.

7. Student Assistant in Serology and Therapeutics of Syphilis.—Practical work in intravenous and intramuscular injections of arsenical, bismuth, and mercurial preparations. Limited to 6. Term Course. Twice weekly, 2:00–4:00. .2Mj. Days to be arranged. Autumn, Winter, Spring, SKOLNIK.

8. Histopathology and Bacteriology of the Skin.—A practical laboratory course arranged for students desiring special instruction in this Department. 4 hours weekly, Autumn, Spring. Hours to be arranged. FINNERUD.

EXPENSES*

SPECIAL CHARGES

A. In the School of Medicine at the University. Laboratory apparatus and supplies.—(1) Students in laboratory courses are required to purchase at the office of the Bursar adequate breakage and supply tickets, to be deposited as follows: for courses in chemistry, with the Curator of Kent Chemical Laboratory; for courses in anatomy, bacteriology and parasitology, biochemistry, botany, pathology, pharmacology, physiology, and zoölogy, at the appropriate laboratory supply store. New tickets must be purchased at the opening of each quarter, and a refund of the unused balance on the old tickets can be obtained at that time. If microscopes are rented for courses requiring their use, a rental fee, varying with the type of the instrument, is charged. (2) A student may procure a skeleton from the Osteological Store Room on payment of a deposit of $50, or parts of a skeleton on payment of special deposits. The deposit will be refunded when the skeleton (or part) is returned uninjured. Credit for courses in gross anatomy will not be reported until all material drawn from the Osteological Store Room is returned. The necessary textbooks may be purchased at the University of Chicago Bookstore in Ellis Hall.

B. In Rush Medical College.—(1) A compound microscope is required for some of the clinical courses. *Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation.* Students not possessing a microscope may rent one from the College at a cost of $3.50 a quarter. Each student is required to secure, for use in the clinical laboratories, a hemacytometer (cost, about $16) and a hemoglobinometer. (2) A fee of $20 is paid for the out-patient obstetrical work. (3) No student can be assigned to any college work until his fees are paid. (4) The annual ticket for the County Hospital, to be procured from the Office at the College, is $5.00.

Deposit.—A deposit of $5.00 is required from each student to cover the cost of unnecessary damage in the College buildings and of avoidable loss and breakage in the laboratories. Deductions will be made from this deposit to cover the cost of articles not returned or of damage to College property. Each student will be charged for damage or loss for which he is individually responsible and for his prorata share of damage or loss, the responsibility for which cannot be individually located. The deposit must be made on entering the College.

LIVING ACCOMMODATIONS

NOTE.—Rates as quoted are subject to change.

HALLS FOR MEN

The College Residence Halls for Men

The College Residence Halls for Men are located at Sixtieth Street and Ellis Avenue. They are built on the quadrangle plan around two courts, Judson and Burton, each with its own entrance, clubroom, dining-hall, and court. Each quadrangle is divided into four halls, each hall accommodating from forty to sixty students. The single rooms are

* For tuition fees see p. 14.

fitted as a combination study and bedroom. Each of the suites of two rooms, consisting of a study and a bedroom, accommodates one or two students. Fireplaces and in some cases private baths add to the attractiveness of some of these suites. All of the rooms are completely furnished (including linens, with the exception of towels).

Quarterly rates cover meals in the dining-halls, use of study or suite, and such recreational facilities as the library, clubroom, and playing fields. The rates range from $148 to $159 an academic quarter for a combination bedroom and study. For suites of a study and a bedroom the quarterly rates range from $150 to $226 a man if the suite is occupied by two, or from $218 to $370 if the suite is occupied by one man only. A descriptive pamphlet showing floor plans, details, and form of application will be sent by the Bursar upon request.

Other Residence Halls for Men

Two residence halls for men—Hitchcock and Snell—are located on Ellis Avenue between Fifty-seventh and Fifty-eighth streets. Single and double rooms in these halls rent for from $42 to $65 a quarter per man. The rooms are completely furnished with the exception of towels, dresser covers, and curtains. There are no dining-rooms in these halls, but residents may take their meals at Hutchinson Commons, a short distance across the Quadrangles. A pamphlet showing floor plans and details will be sent by the Bursar upon request.

HALLS FOR WOMEN

Four residence halls for women students—Beecher, Foster, Green, and Kelly—are located on University Avenue between Fifty-eighth and Fifty-ninth streets. Rooms accommodate one or two students and are completely furnished with the exception of towels, dresser covers, and curtains. Quarterly rentals including meals range from $124 to $156 a student. A pamphlet with floor plans, details, and rental rates will be sent by the Bursar upon request.

Blake and Gates Halls, at Fifty-eighth Street and Ellis Avenue, are being utilized as temporary residence halls for women. Quarterly rentals range from $48 to $63. These halls have no dining-room, but residents may take meals at the Cloister Club of Ida Noyes Hall or at Hutchinson Commons.

Drexel House, a co-operative hall accommodating sixteen women students, is located at 5845 Drexel Avenue, two blocks from the central quadrangle. The rooms are single and rent for $42 each a quarter. The housekeeping, including preparation of meals and cleaning, is done co-operatively by the residents. Application should be sent to the Bursar.

UNIVERSITY FURNISHED APARTMENTS

The University has a limited number of apartments for rental to married students. These apartments are furnished with the exception of bedding, table linen, and silver. The number of rooms in each apartment ranges from three to six, and the rentals are from $47.50 to $60 a month. The rental rate includes the charge for gas, electric current, and electric refrigeration.

Application for these apartments should be made to the Bursar. The number in the family and the period for which the apartment is wanted should be indicated.

INTERNATIONAL HOUSE

International House, the gift to Chicago of Mr. John D. Rockefeller, Jr., is designed primarily as a residence for foreign students and for American students with academic standing beyond the first two years of college work who are interested in international fellowship and in problems of an international character. The building provides completely equipped living accommodations for five hundred men and women students.

Rates for rooms range from $60 to $90 a quarter. The fee for either resident or nonresident membership is $2.15 a quarter. Cafeteria, *table d'hôte* and coffee-shop services are provided. On the average, three substantial meals a day cost from $0.90 to $1.25 in the cafeteria, and from $1.35 to $1.50 with table service. The Tiffin Room has *à la carte* service for light refreshments.

A prospective member is urged to file his application as early as possible. Application forms may be obtained from the Office of Admissions and Membership, International House, 1414 East Fifty-ninth Street, Chicago, Illinois.

OTHER HOUSING ACCOMMODATIONS

In order to assist students who require accommodations in private homes, the Bursar's office maintains a listing and inspection service. Rooms are inspected and placed on an approved list if they meet established standards. Students should make personal inspection before engaging such rooms.

Furnished houses or apartments of from four to ten rooms in the immediate vicinity of the University range in rental from $55 to $150 a month. One-, two-, and three-room furnished apartments range in rental from $42.50 to $100 a month.

Rooms may be obtained in the vicinity of Rush Medical College at from $4 to $7 a week. Board and room together may be obtained at from $8 to $12 a week. A Bureau of Information is maintained at the Y.M.C.A., to which students may apply for directions as to desirable board and lodging.

ESTIMATE OF EXPENSES

The following table will enable the students to form an estimate of quarterly expenses *exclusive of tuition fees.*

	Low	Average	Liberal
Registration and Health Service fees	$ 6	$ 6	$ 6
Rent and care of room	42	60	120
Board	75	82	115
Laundry and cleaning	12	25	50
Textbooks and supplies	15	25	40
Incidentals	15	35	55
Total (1 quarter)	$165	$233	$386
Total for academic year (3 quarters)	$495	$699	$1,158

FELLOWSHIPS AND OTHER AIDS

A. FELLOWSHIPS

Fellowships are awarded annually through the Committee on Fellowships and Scholarships.

Applications for fellowships.—Applications and/or recommendations for fellowships should be in the hands of the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, *before March 1.*

Attainments required.—The candidate must have attained proficiency in the department in which he wishes to pursue advanced study. In general, he should have spent at least one year in resident study after receiving his Bachelor's degree. In making appointments, special weight is given to dissertations indicating ability to conduct original investigation.

Appointments.—The annual appointments to regular fellowships are made April 1. Appointees are given until April 15 to accept or decline. Fellowships are available for any three of the four quarters, beginning with the summer quarter following the date of appointment, unless otherwise stated in the appointment.

Conditions of acceptance.—Acceptance of a fellowship is conditioned by agreement to devote full time to graduate study unless special permission for other work has been secured in advance through written application to the Chairman of the Committee on Fellowships.

Payment of tuition.—All fellows are required to pay the full tuition fee at the beginning of each quarter during the tenure of their appointments. Holders of fellowships are not eligible to reduced fees.

Quarterly reports.—Each fellow is required to make a written report to the Committee on Fellowships and Scholarships at the beginning of each quarter, outlining his work as a student, and the work assigned to him by the University. This report should be endorsed by the Chairman of the Department and the Dean of Students of the Division. Report blanks may be procured at the office of the Committee on Fellowships and Scholarships.

There are three types of fellowships: (1) regular University fellowships; (2) endowed and annual fellowships; and (3) special research funds and foundations.

I. UNIVERSITY FELLOWSHIPS

Regular University fellowships are provided in all departments of the University by appropriations from the general funds of the University. There are seventy or more of these fellowships, ranging in amount of stipend from $300, the regular tuition fees for three quarters, to an amount in excess of fees to cover part of the student's living expenses.

The University requires of holders of regular University fellowships a modicum of service which is done under the direction of the departments in which the appointments are made. Such service may consist of assistance in reading and preparing examination papers; work on a University journal; or assistance in one of the departmental laboratories, libraries, or museums. In no case is a fellow expected to devote so much time to the work here indicated as to interfere seriously with the pursuit of his particular study.

II. ENDOWED AND ANNUAL FELLOWSHIPS

In addition to the regular University fellowships there are several special and annual fellowships for advanced study in specific fields. The appointments are made by the departments to which these honors are assigned, and are usually to persons who have begun resident study.

The amounts of the awards vary somewhat from year to year with changes in income and the number of recipients chosen.

Following is a list of special and annual fellowships of especial interest to students in medicine:

The Edith Barnard Memorial Fellowship in Chemistry, established in memory of Dr. Edith Barnard, is awarded upon the nomination of the Department of Chemistry.

The Bartlett Memorial Fellowship, established in memory of Dr. Joseph Bartlett, provides funds for a biological chemist to collaborate "in research work looking to the finding of a satisfactory serum for the treatment and cure of pneumonia."

The Dane Billings Memorial Fellowship, founded by Dr. Frank Billings for research in medicine, is awarded upon recommendation of the Dean of Rush Medical College.

The Daniel R. Brower Fellowship is awarded upon recommendation of the Dean of Rush Medical College.

The Seymour Coman Fellowships are to be used for scientific research with special reference to preventive medicine and the cause, prevention, and cure of diseases. The candidate must have the qualifications of the M.D. or Ph.D. degree and must devote his entire time to research. Appointments are made upon nomination of the Seymour Coman Research Committee.

The Stanton Abeles Friedberg Fellowship in Laryngology and Otology, established in 1921 by Mrs. Stanton A. Friedberg in memory of her husband, is awarded upon recommendation of the Department of Otolaryngology and the Dean of Rush Medical College.

The Francis A. Hardy Fellowship in Surgery and Assistant House Surgeonship in the Presbyterian Hospital, established by Mr. Francis A. Hardy, is awarded by the Department of Surgery of Rush Medical College to a graduate in medicine.

The James H. Harper Fellowship of Medical Research, established by the request of Mr. James H. Harper, is awarded by the head of the Department of Medicine of Rush Medical College.

The Hyde Memorial Fellowship is for research in skin diseases and cancer. The award is made to Medical School graduates upon recommendation of the Chairman of the Department of Dermatology of Rush Medical College.

The E. Fletcher Ingals, Jr., Fellowship in Laryngology and Otology is awarded to a physician who is seeking to qualify himself for the practice of laryngology and otology. Opportunity is afforded for advanced work and clinical training.

The Mr. and Mrs. Frank G. Logan Fellowships, endowed by Mr. Frank G. Logan, are awarded to students in the Department of Bacteriology and Parasitology. The annual stipend of each fellowship varies with the preparation of the student or investigator. Awards are made on the recommendation of the Dean of the Division of the Biological Sciences, with the approval of the President.

The Arno B. Luckhardt Fellowship, for research in physiology, is awarded upon the recommendation of the Chairman of the Department of Physiology.

The Fellowship in Pathology is awarded upon the recommendation of the Department of Pathology of Rush Medical College.

The Anna Louise Raymond Fellowship in Medicine is awarded biennially in support of work directed by Dr. Wilber E. Post.

The Benjamin J. Rosenthal Memorial Research Fellowship in Pediatrics, established by Mrs. Benjamin J. Rosenthal and her two daughters through the Rosenthal Charities, which Mr. Rosenthal established in 1922, is awarded to a graduate medical student of high caliber for research into the causes, prevention, and cure of children's diseases.

The Nicholas Senn Fellowship in Surgery is awarded to a graduate in medicine upon recommendation of the Chairman of the Department of Surgery of Rush Medical College.

The Douglas Smith Foundation provides funds to support various research projects in medicine. The number of fellowships awarded and the amount of each fellowship varies according to the problems under investigation and the qualifications of the holders of the fellowships. Application should be made to the Chairman of the Department in which the applicant wishes to pursue research.

The Gustavus F. Swift Fellowship in Chemistry, endowed by Mrs. Gustavus F. Swift as a memorial to her husband, is awarded for especial ability in research upon the nomination of the Department of Chemistry.

The Talcott Fellowships, endowed by Mr. William A. Talcott, are reserved for graduate students, preferably for graduates of Rockford College.

The A. D. Thomson-Bevan Fellowship in Surgery and House Surgeonship in the Presbyterian Hospital is awarded to a graduate in medicine upon recommendation of the Chairman of the Department of Surgery of Rush Medical College.

The Helen Kimmins Van Liere Research Fellowship was established by Dr. Edward J. Van Liere in memory of his wife, for advanced work in the Department of Physiology.

The William H. Wilder, Jr., Fellowship in Neurology, established by Dr. and Mrs. William H. Wilder, is awarded to a student of neurology nominated by the Department of Anatomy upon recommendation of the professors in charge of neuro-anatomy and clinical neurology.

Other fellowships in the Medical Schools are the *Frank Billings Fellowships*, established by Dr. Frank Billings; the *E. R. LeCount Fellowship* in Pathology; the *James B. Herrick Fellowship* in Medicine; the *Ernest E. Irons Fellowship* in Medicine; and the *Wilber E. Post Fellowship* in Medicine. Owing to the restriction of income, not more than one or two of these fellowships will be awarded annually.

III. SPECIAL RESEARCH FUNDS AND RESEARCH FOUNDATIONS

The Dr. Wallace C. and Clara A. Abbott Memorial Fund was established to benefit the cause of medical, chemical, or surgical science.

The Watson Keep Blair Research Fund, established by the will of Mrs. Alice Keep Blair in memory of her son, is used for research work in the Medical School.

The Bella D. Brown Memorial Fund, established by the late Alvia K. Brown in memory of his wife, is available for work in pediatrics.

The Morton D. Hull Fund supports research into the causes, treatment, and cure of "Parkinson's disease."

The A. B. Kuppenheimer Foundation was established by the will of Mr. Kuppenheimer for the study of venereal diseases.

The Louise B. and Emma M. Kuppenheimer Foundation was established for the study of structure, functions, and diseases of the eye.

The Lasker Foundation is for research in causes, nature, prevention, and cure of degenerative diseases.

The Frederick Raymond Otis Memorial Fund, established by Mr. Otis' daughter Margaretta E. Otis, is available for medical work.

The A. D. Thomson Medical Fund is awarded for genito-urinary surgery.

The Gerard Van Schaick Fund is awarded for investigation of the pathology of the eye.

B. SCHOLARSHIPS

I. HONOR SCHOLARSHIPS

Divisional Honor Scholarships are assigned by the Committee on Fellowships and Scholarships to students for excellence in scholarship in Divisional work upon the recommendation of the various departments. These scholarships are available both to undergraduate and graduate students, and to those who have attained the equivalent status.

Honor Scholarships are regularly assigned for three quarters of the academic year and yield full or partial tuition fees.

Selection is made upon the basis of scholarship only. *Application is not required.*

II. ENDOWED SCHOLARSHIPS

Application.—All applications for endowed scholarships are to be made to the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, not later than June 1. Reports of awards are made during the summer. In general only students who have been in residence at least three quarters are eligible to apply for these scholarships, unless the terms of the gifts stipulate otherwise.

The endowed and special scholarships, with conditions of award, follow:

The Marie J. Mergler Scholarship provides annual fees for a young woman student specializing in physiology.

The James Nelson Raymond Scholarships, established by Mrs. Anna Louise Raymond, provide partial tuition fees for two worthy and needy students in the Medical School.

The Sydney Walker III Scholarship in Physiology, established by Dr. Sydney Walker, Jr., in memory of his son, provides partial tuition fees. The nomination is made by the Department of Physiology on the basis of ability and promise in research, and the holder is required to devote the major part of his time to work in the Department of Physiology.

The Clarence Milton Swale Memorial Scholarship, established by the will of Lillian G. Swale, provides tuition fees at Rush Medical College for a young man, preferably from the State of Iowa.

The Frederick A. Smith Scholarship Fund, established in 1920 by the will of Judge Frederick A. Smith, of Chicago, provides tuition for several students. Appointment is made on the basis of scholarship and need.

III. THE LA VERNE NOYES FOUNDATION SCHOLARSHIPS

The La Verne Noyes Foundation, established July 5, 1918, by the gift of Mr. La Verne Noyes, provides part tuition fees for students who (1) shall themselves have

served in the Army or Navy of the United States in the war for liberty into which the Republic entered on April 6, 1917, provided that such service was terminated by honorable discharge; or (2) shall be descendants by blood of anyone in service in the Army or Navy of the United States who served in said war; or (3) shall be descendants by blood of anyone who served in the Army or Navy of the United States in said war, provided that such service was terminated by an honorable death or an honorable discharge.

When sufficient funds are available, the following regulations governing eligibility obtain: (1) Veterans shall receive not less than one-half tuition if they have had five months or more of service. In cases of established need, the sons and daughters of veterans who died in service shall receive allotments equivalent to those given to veterans. (2) Descendants of veterans who served five months or more shall be granted aid in those cases in which need is established. This applies to new applicants only. (3) Where enlistment was made after May 11, 1918, application of descendants will not be considered unless active overseas pre-Armistice service was rendered. Awards will be made only in cases of established need. This applies to new applicants only. (4) Descendants of veterans shall be eligible for a continuance of aid only when they receive passing grades in at least one-half of the work for which they were registered in the last quarter of residence.

La Verne Noyes Scholarships are awarded for only one quarter at a time, but upon reapplication are continued during the student's period of residence in the University. Reapplication consists of an oral or written statement to the secretary (Cobb Lecture Hall, Room 203) that the scholarship is desired for a given quarter or for an academic year. Students in residence should make a request for the next quarter, or for the remainder of the academic year, at the time of receiving the voucher at the beginning of any quarter, or, in case of uncertainty, as soon as plans are formulated, but not later than two weeks in advance of the opening of the quarter. *Students not in residence* are required to make request in writing not less than two weeks in advance of the opening of the quarter in which they wish to receive tuition assistance from the Noyes Fund.

IV. UNIVERSITY SCHOLARSHIPS

The University has provided funds of about $12,000 annually from which scholarships paying half the tuition may be given medical students who have excellent scholastic records or who are unable to continue without such help. Application should be made to the Dean of Students in the Division of the Biological Sciences.

C. PRIZES

I. IN THE MEDICAL SCHOOL OF THE UNIVERSITY OF CHICAGO

The Howard T. Ricketts Prize is awarded on the third day of May to a student of the University of Chicago presenting the best results in research in pathology or bacteriology.

The income from the Harry Ginsburg Memorial Fund, established in memory of Harry Ginsburg, is awarded annually to a medical student in the Department of Physiology,

the recipient to be designated by the Chairman of the Department upon the basis of industry, sincerity, and ability.

II. IN RUSH MEDICAL COLLEGE

The Daniel Brainard Prize.—A medal is annually given by the Faculty to the student who makes and presents to the College Museum the best accepted dissection in surgical anatomy.

The Freer Prizes.—These prizes are derived from the income of a fund presented to Rush Medical College by the late Nathan M. Freer, of the Board of Trustees, as a memorial to the names of two honored members of his family long identified with the highest interests of this institution.

**The Joseph Warren Freer Medal and Prize* are awarded to a member of the Senior class for excellence in work in the Department of Medicine.

**The L. C. Paine Freer Medal and Prize* are offered to that member of the Freshman or Sophomore class who presents the best dissertation involving investigation on the part of the student. The dissertation must be placed in the hands of the Dean of Medical Students by April 1, 1941.

The Henry M. Lyman Memorial Prize.—In memory of Henry M. Lyman, who for many years devoted much of his best energies and his unusual ability to the upbuilding of Rush Medical College, and who served successfully as Professor of Physiology and Neurology and Professor of Medicine and who was later Dean of the Faculty, a fund has been created by his children, the proceeds of which are offered to a member of the Junior class for excellence in the work of the Junior year in the Department of Medicine.

The Benjamin Rush Prize, consisting of a medal and a cash award, is awarded each year by the Faculty of Rush Medical College to that member of the graduating class ranking highest in the examinations in every department of Medicine represented that year in the examination for the degree.

D. MISCELLANEOUS AWARDS

In addition to the foregoing fellowships offered by the University of Chicago, among many others there are the following fellowships, scholarships, or prizes for which University of Chicago students are eligible to compete.

The Joseph A. Capps Prize. The Institute of Medicine of Chicago offers a prize of $500 for the most meritorious investigation in medicine or in the fundamental sciences, provided that the work has a definite bearing on some medical problem. Competition is open to graduates of Chicago medical schools who have received the M.D. degree during the year 1931 or thereafter. Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 122 South Michigan Boulevard, not later than December 31, 1940. In the case of a paper submitted by more than one author, it is stipulated that all the authors must qualify, and that the prize paper be published under the same authorship as that under which it was submitted. The winner of the prize will be expected to present the results of his investigation before the Institute at

* *Rules governing the award of Freer medals.*—(*a*) The candidate must present his dissertation in typewritten form. (*b*) Each candidate may present but one dissertation. (*c*) As the purpose of the medals is to stimulate research, only those dissertations are considered that have been written in competition for the medal. This excludes those published previous to their presentation to the committee and those that were written for a degree. (*d*) Applicable to the Joseph Warren Freer Medal only. Only those dissertations that are submitted by bona fide Juniors and Seniors are considered. Students acting as assistants to instructors and receiving compensation therefor cannot compete for the prize.

some meeting in 1941, the time to be designated later. If no paper presented is deemed worthy of the prize, the award may be withheld at the discretion of the Board of Governors.

The John Simon Guggenheim Memorial Foundation Fellowships offer to scholars, both men and women, opportunities under the freest possible conditions to carry on advanced study and research in any field of knowledge, or opportunities for the development of unusual talent in any of the fine arts, including music. Application should be made to the Secretary of the Guggenheim Memorial Foundation, 551 Fifth Avenue, New York City.

The National Research Council Fellowships, provided by the Rockefeller Foundation to promote scientific research, are awarded by the National Research Council. Fellows may choose the institution in which they desire to pursue research. Applications should be made to the National Research Council, Washington, D.C.

The Rhodes Scholarships at Oxford University are administered by the Rhodes Trust. The secretary of the committee for the state of Illinois is Mr. Carl Spaeth, Law School, Northwestern University. Mr. Robert V. Merrill is chairman of the University of Chicago committee.

E. UNIVERSITY SERVICE

I. GRADUATE SERVICE SCHOLARSHIPS

A limited number of service scholarships are available for graduate students of attainment and promise. These scholarships yield an amount equivalent to the tuition fees in return for service in the departments in which the scholarships are awarded. Tuition must be paid in advance; payment on service scholarships is made at the end of the quarter in which the service is rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses. Application should be made to the Committee on Fellowships and Scholarships during the period from January 1 to March 1. Appointments are made on April 1 for the year following.

II. MISCELLANEOUS SERVICE

Other forms of student service are: (*a*) messenger service at the Information Office, applications for which should be addressed to the Bursar; (*b*) service in the University Choirs, applications for which should be addressed to the Director of the University Choirs; and (*c*) service in the Commons, for which the compensation is furnished in board. Applications should be addressed to the Director of the Commons.

III. THE BOARD OF VOCATIONAL GUIDANCE AND PLACEMENT

Through the Board of Vocational Guidance and Placement the University maintains a bureau for the recommendation of students to teaching positions, to industrial and business connections, and to part-time employment while in the University.

The office of the Board of Vocational Guidance and Placement is in Cobb Lecture Hall, Room 215.

F. LOAN FUNDS

From funds created by friends of the University loans are made to many students of worth and promise who need temporary aid. These funds are limited and are usually exhausted early in the academic year.

The Clara M. Coit Loan Fund for Medical Students is established to aid needy students who give promise of unusual service in medicine. Interest is charged at the rate of 4 per cent. Application should be made to the Dean of Medical Students.

The Medical Students' Loan Fund, established by the Physicians Association of Cook County, is available for medical students, preferably colored, and is loaned with interest at 4 per cent. Application should be made to the Dean of Medical Students.

The National Fraternity, Alpha Epsilon Iota, has available a loan fund contributed by its members in memory of one of its members, Jane Darling Stevenson. The loans are restricted to women medical students in advanced classes. Further information about this fund may be obtained from the Chairman of the National Committee, Monica Donovan, M.D., 450 Sutter Street, San Francisco, California.

LIBRARIES, LABORATORIES, AND MUSEUMS

A. THE LIBRARIES

The Libraries of the University include the General Library and the Departmental Libraries, including the Library of Rush Medical College.

The General Library is a reference and circulating library and is open to students in all departments of the University. Students who have been matriculated and paid their fees may take out at one time nine volumes from the General Library and other libraries open to circulation, but no more than six from any one library. These may be kept two weeks, with privilege of extension of loan in special cases. The library is open regularly on week days from 8:00 A.M. to 10:00 P.M.; on Saturdays from 8:00 A.M. to 6:00 P.M.; and during vacations from 9:00 A.M. to 1:00 P.M. daily.

The Library of the Biological Departments is located in Culver Hall, conveniently accessible to all students working in these departments. It includes the General Medical Library.

The Billings Library of current medical literature is in the Billings Hospital. It contains about 8,000 volumes and files of journals covering the last five years.

The Library of Gynecology and Obstetrics in the Chicago Lying-in Hospital contains about 4,000 volumes and files of journals covering the last five years.

The Libraries contain at the present time about 1,271,000 volumes, bound and catalogued. They receive 5,000 current periodical publications, including in part the transactions and proceedings of learned societies. Technical periodicals are as a rule found in the Departmental Libraries.

The Library of Rush Medical College contains 39,000 volumes, 5,300 pamphlets, and files of all the leading medical journals in English, German, and French. During the last college year the library had a daily average attendance of 47 students.

The Rental Library is located in the University Bookstore, 5802 Ellis Avenue. It contains more than 50,000 volumes. These books, supplementing the general library system, are rented to members of the University at a nominal cost.

B. THE LABORATORIES

LABORATORIES AT THE QUADRANGLES

The Kent and the George Herbert Jones Chemical Laboratories, the Ryerson Physical Laboratory, and Eckhart Hall for Mathematical Science contain rooms for special research, small laboratories for work of investigation, large laboratories for general instruction, lecture-rooms, classrooms, library, museum, and offices.

The Hull Biological Laboratories are a group of buildings devoted to the study of the anatomical, botanical, and zoölogical sciences. The Whitman Laboratory of Experimental Zoölogy, the gift of Professor and Mrs. Frank R. Lillie, affords opportunity for research work in this department.

The Abbott Memorial Building provides laboratories for physiology, biochemistry, and pharmacology adjoining the Albert Merritt Billings Hospital on the Quadrangles and comprises seven floors, including the ground floor. Mechanics' shops, storerooms,

and freezing-room are located on the ground floor. All floors are provided with mechanical refrigerators, automatic elevators, and dumb waiters.

The section devoted to physiology includes large laboratories for undergraduate and graduate courses, for work in general physiology and in physiological optics, many research rooms and special laboratories for basal metabolism, electrocardiographic, and X-ray studies.

The section devoted to biochemistry provides on the lower floors large laboratories for the work of the fundamental courses, lecture-rooms, rooms for balances, ovens, polariscopes, solutions, Kjeldahl apparatus, hydrogen sulphide work, conferences, etc., large laboratories for advanced work together with many smaller rooms for research and work on special problems. One floor is devoted especially to work involving the application of physical chemistry to biological problems. The fifth floor is devoted to pharmacology providing laboratories for chemical and mammalian work, operating rooms, research rooms, and conference rooms. Animal rooms, operating rooms, sterilizing rooms, etc., are on the sixth floor.

The pathology building is incorporated with the buildings of the Billings Hospital and the University Clinics, and contains extensive laboratories.

The Frank Billings Medical Clinic incorporates within a single architectural unit the laboratories of the Department of Medicine and those portions of the Albert Merritt Billings Hospital and the Max Epstein Clinic in which the Department of Medicine cares for patients. The laboratories, which are unusually extensive and complete, afford facilities for teaching and for employment of the methods used in the investigation of diseases, including those common to medicine and biology, physiology and chemistry.

The facilities of the Surgical Department, which are all located in one building, comprise 100 beds in the Albert Merritt Billings Hospital, an out-patient department with separate divisions for general surgery and the surgical specialties, and classrooms and laboratories in the Medical School. Laboratory space in a student's room, where both routine and investigative work may be performed, is assigned to each student registered in the Department of Surgery. The Home for Destitute Crippled Children and the Country Home for Convalescent Crippled Children provide facilities for orthopaedic surgery.

Extensive laboratory facilities for medical students and research workers in the Department of Pediatrics are provided in the Bobs Roberts Memorial Hospital for Children. In this hospital, which adjoins the Albert Merritt Billings Hospital to the southwest, laboratories and classrooms are in close physical connection with the hospital facilities and with the large Out-Patient Department. The entire fifth floor of the building and most of the ground floor are devoted to laboratories. Adequate equipment is provided for biochemical, physiological, biophysical, serological, and pathological research.

LABORATORIES IN CHICAGO LYING-IN HOSPITAL

The Department of Obstetrics and Gynecology has its laboratories in a separate section erected by the University in the Chicago Lying-in Hospital group, immediately adjacent to the Mothers' Aid Pavilion in which all infected cases are treated. Special laboratories are included for pathology, fetal pathology, biochemistry, physiological chemistry, bacteriology, and serology. In addition, a demonstration laboratory, a birth-room, and a library have been provided.

LABORATORIES AT RUSH MEDICAL COLLEGE

The Rawson Clinical Laboratory was originally made possible through the generous gift of $300,000 by Frederick H. Rawson, president of the Union Trust Company. It has been erected at the northeastern corner of South Wood and Harrison Streets on the ground formerly occupied by the old Rush Clinical Building. It covers an area approximately 90 by 100 feet and is five stories in height. Connections have been made with Senn Hall on all floors, and with the Presbyterian Hospital. The building houses the administration offices of the College and the large medical library and special Faculty rooms on the first floor. The Departments of Occupational Therapy, Hydrotherapy, locker-rooms and restrooms, and the library stack-room are in the basement.

It is planned that the Department of Occupational Therapy shall establish contact with the industries of Chicago and vicinity for the purpose of training and placing in positions of employment persons suffering from various physical handicaps.

The second, third, and fourth floors are devoted to various departments of the Central Free Dispensary, classrooms, and laboratories.

On the fifth floor is the Department of Pathology, housed in the Norman Bridge Laboratories of Pathology. Dr. and Mrs. Norman Bridge, of Los Angeles, contributed $100,000 in order to enable the University to build the fifth story of this building.

Senn Hall, erected through the munificence of the late Professor Senn and other members of the Faculty, adjoins the Clinical Building on the east. It covers a ground space of 40 by 90 feet, is eight stories in height (including the basement), and of absolutely fireproof construction. The basement and first three floors, affording over 10,000 square feet of floor space, are devoted to the dispensary and the clinical teaching connected therewith. In 1939–40 patients made 181,714 visits to the dispensary, including visits from 13,859 new patients. The fourth and fifth floors are occupied by clinical laboratories and conference rooms. The remaining two stories contain two surgical and medical amphitheaters, seating about 140 each, with necessary waiting and preparation rooms.

The Laboratory Building, on the south side of Harrison Street, is 100 by 45 feet in area and six stories in height (including basement). This building provides facilities for research and for instruction in operative surgery, surgical anatomy, pharmacology, and therapeutics.

HOSPITALS

Clinical facilities for medical students and research workers are afforded at the University Quadrangles by the University Clinics, which now comprise the Albert Merritt Billings Hospital and the Max Epstein Clinic, the Bobs Roberts Memorial Hospital for Children, the Chicago Lying-in Hospital and Dispensary, and, by affiliation, the Home for Destitute Crippled Children. The Clinics are designed primarily for the purpose of providing all the facilities desirable for the instruction of students in clinical medicine and for the carrying-on of investigation and research.

The Albert Merritt Billings Hospital has a capacity of 216 beds intended for the use of the departments of Medicine and Surgery. The Max Epstein Clinic, located under the same roof, provides for the care of several hundred ambulatory cases daily. The laboratories of the departments of Medicine and Surgery are in close physical connection with the hospital.

The Bobs Roberts Memorial Hospital for Children, adjacent to the Albert Merritt Billings Hospital, has a capacity of 73 beds and provision for a large out-patient department. The Department of Pediatrics has its laboratories on the ground floor and the fifth floor of the building, and centers its activities in it.

The Home for Destitute Crippled Children adjoins the Albert Merritt Billings Hospital on the southeast and has a potential capacity of 68 beds for the care of crippled children. The Division of Orthopedic Surgery of the Department of Surgery is in charge of the professional services, and is provided with laboratories for research.

The Chicago Lying-in Hospital and Dispensary opened its new building in the block just west of the Bobs Roberts Memorial Hospital for Children, in May, 1931. The bed capacity is 163. The Department of Obstetrics and Gynecology is accommodated in this building. Student laboratories, classrooms, and research laboratories have been incorporated into the building for the use of the Department. The Max Epstein Clinic for out-patients materially increases the clinical facilities.

The total bed capacity of the University of Chicago Clinics is thus 520, and provision is made for more than 500 out-patients daily. In addition to this, through the Country Home for Convalescent Crippled Children and through affiliation with the Children's Memorial Hospital and the West Side Clinic of the Home for Destitute Crippled Children, the Clinics have abundant clinical material to supplement that available on the Quadrangles.

The Presbyterian Hospital, with 430 beds and over 11,000 admissions a year, adjoins Rush Medical College and is connected with it. Close co-operation is maintained between hospital and college, and opportunity is afforded students of studying patients in the wards.

In the Cook County Hospital there are 3,500 beds. Members of the Rush Faculty have services in the Hospital so that a large number of beds are available for clerkships and other teaching.

ATTENDING STAFF OF THE PRESBYTERIAN HOSPITAL

MEDICINE

Consulting Physicians: Drs. James B. Herrick, John A. Robison.

Attending Physicians: Drs. Ernest E. Irons, Wilber E. Post, Rollin T. Woodyatt, Ralph C. Brown.

Associate Attending Physicians: Drs. William A. Thomas, Lee C. Gatewood, James B. Eyerly, Frank B. Kelly, Willard O. Thompson, William G. Hibbs.

Assistant Attending Physicians: Drs. Howard M. Sheaff, Homer K. Nicoll, Charles M. Bacon, Alva A. Knight, Clayton J. Lundy, Leo K. Campbell, Ralph W. Trimmer, Robert E. Johannesen, Evans W. Pernokis, Stuyvesant Butler, Earle Gray, Eugene F. Traut, Willard L. Wood, Francis L. Foran, Evan M. Barton, William J. Kirby, George W. Stuppy, Joseph R. Bennett, Herbert C. Breuhaus.

DISEASES OF CHILDREN

Attending Pediatrician: Dr. Clifford G. Grulee.

Associate Attending Pediatricians: Drs. Arthur H. Parmelee, Charles K. Stulik, Heyworth N. Sanford, Eleanor I. Leslie.

Assistant Attending Pediatricians: Drs. John J. Zavertnik, Bert I. Beverly, Harold J. Noyes, C. Jack Harrison, Walter Siemsen, Noel G. Shaw.

PSYCHIATRY AND NEUROLOGY

Attending Neurologists: Drs. Peter Bassoe, John Favill.

Associate Attending Neurologist: Dr. Loren W. Avery.

Assistant Attending Neurologist: Dr. William H. Haines.

SURGERY

Attending Surgeons: Drs. Arthur D. Bevan, Vernon C. David, Carl B. Davis, Kellogg Speed, Frederick B. Moorehead (Oral Surgery), Herman L. Kretschmer and Robert H. Herbst (Urology).

Associate Attending Surgeons: Drs. Edwin M. Miller, Albert H. Montgomery, Elven J. Berkheiser (Orthopedic Surgery).

Assistant Attending Surgeons: Drs. Francis H. Straus, Harry A. Oberhelman, Hillier L. Baker, Willis J. Potts, Randolph F. Olmsted, Stanley E. Lawton, Frank V. Theis, Arthur E. Diggs, Dean L. Rider, Richard K. Gilchrist, A. Louis Rosi, John M. Dorsey, Egbert Fell, Adrien Verbrugghen (Neuro-Surgery), Norris J. Heckel, James W. Merricks (Urology), Kay L. Thompson (Oral Surgery).

Anesthetists: Drs. Isabella Herb, Mary Lyons, Alice McNeal, Nora B. Brandenburg, Mary E. Davies.

Roentgenologist: Dr. F. B. Squire.

OBSTETRICS AND GYNECOLOGY

Attending Obstetricians and Gynecologists: Drs. Noble S. Heaney, Carey Culbertson.

Associate Obstetricians and Gynecologists: Drs. Aaron E. Kanter, Edward D. Allen.

Assistant Attending Obstetricians and Gynecologists: Drs. Fred O. Priest, Harry Boysen, Arthur H. Klawans, Cecil Draa, Hugo Baum.

LARYNGOLOGY AND OTOLOGY

Attending Laryngologists and Otologists: Drs. George E. Shambaugh, Daniel B. Hayden.

Associate Attending Laryngologists and Otologists: Drs. ~~Louis T. Curry~~, ~~Elmer W. Hagens~~.

Assistant Attending Laryngologists and Otologists: Drs. Linden J. Wallner, ~~George E. Shambaugh, Jr.~~, Richard W. Watkins, ~~Stanton A. Friedberg~~, Paul A. ~~Campbell~~.

OPHTHALMOLOGY

Attending Ophthalmologist: Dr. ~~William F. Moncreiff~~.

Associate Attending Ophthalmologists: Drs. ~~Earle B. Fowler~~, Charles G. Darling, ~~Thomas D. Allen~~, Robert von der Heydt, Bertha Klien.

Assistant Attending Ophthalmologists: Drs. Vernon M. Leech, Elias Selinger, Max Jacobson, Cyril V. Crane, Karl J. Scheribel.

DERMATOLOGY

Attending Dermatologist: Dr. ~~Oliver S. Ormsby~~.

Assistant Attending Dermatologists: Drs. ~~James H. Mitchell~~, ~~Clark W. Finnerud~~, ~~Michael H. Ebert~~, ~~James R. Webster~~.

PATHOLOGY

Associate Attending Pathologists: Drs. ~~Carl W. Appelbach~~, ~~George J. Rukstinat~~.

Resident Pathologist: Dr. ~~Cornelius Hagerty~~.

Attending Toxicologist: Dr. ~~William D. McNally~~.

PHYSIOTHERAPY

Assistant Attending Physiotherapist: Dr. Disraeli W. Kobak.

CHEMISTS

Resident Chemist: Milnor R. Freeland.

Resident Bacteriologist: G. Bernice Rhodes.

The Cook County Hospital, which is situated opposite the College, admits over 40,000 patients annually. In this institution are given about forty clinics a week, including all varieties of medical and surgical cases. The facilities for the study of pathology which are offered at the Cook County Hospital are exceptionally good. Between 700 and 800 necropsies are made annually by Professor Cannon and the other pathologists of the hospital. The General Hospital contains 3,200 beds. Records show that 40,000 patients were admitted and treated, 40,000 dispensary cases treated, and 40,000 examined and rejected or given advice (not hospital cases), making a total of 120,000 in one year.

Clinical courses in the Cook County Hospital are offered to the students of Rush Medical College by the following members of the Faculty:

Attending Physicians: Drs. Archibald Hoyne (contagious), George C. Turner, Jay B. Carter (tuberculosis), Clayton J. Lundy, Eugene F. Traut, Aaron Arkin, Samuel J. Taub, Frank B. Kelly, Francis L. Foran, Yale N. Levinson.

Associate Physicians: Drs. Samuel J. Mark, George Holmes (tuberculosis), J. J. Zavertnik (contagious), Thomas G. Walsh, Stanley Brownstein, Jacob S. Fishman, A. S. Shohet, Catherine Logan, Roland L. Kesler.

Associate Psychiatrists: Drs. Morris Braude, David B. Rotman.

Attending Neurologists: Drs. Loren W. Avery, Richard B. Richter.

Associate Neurologist: Dr. Alfred H. Stanton.

Attending Pediatrists: Drs. Charles K. Stulik, Craig D. Butler, Arthur H. Parmelee.

Associate Pediatrists: Drs. Heyworth N. Sanford, Noel G. Shaw, Eleanor I. Leslie.

Attending Surgeons: Drs. Elven J. Berkheiser (Orthopedic), Vernon C. David, George G. Davis, Roger T. Vaughan, Ralph Bettman, Edwin M. Miller, Harry A. Oberhelman, Albert H. Montgomery.

Associate Surgeons: Drs. Fred Shapiro (Orthopedic), Francis H. Straus, Adrien Verbrugghen, Egbert G. Fell, A. Louis Rosi, Dean L. Rider, John Olwin, Arthur E. Diggs.

Attending Gynecologist: Dr. Aaron E. Kanter.

Associate Gynecologist: Dr. Louis McRae.

Attending Otolaryngologist: Dr. Louis T. Curry.

Associate Otolaryngologist: Dr. Stanton A. Friedberg.

Attending Ophthalmologists: Drs. William F. Moncreiff, Elias Selinger.

Associate Ophthalmologists: Drs. Max Jacobson, Raymond Carmody.

Attending Dermatologist: Dr. Michael H. Ebert, H. V. Omens.

Associate Dermatologist: Dr. Albert H. Slepyan, Walter W. Tobin.

Attending Pathologists: Drs. C. W. Apfelbach, G. J. Rukstinat.

Associate Pathologist: Dr. Cornelius S. Hagerty.

Attending Physiotherapist: Dr. D. W. Kobak.

The Country Home for Convalescent Crippled Children, at Prince Crossing, Illinois, a few miles west of Chicago, is owned and operated by the University of Chicago. It has for its purpose the care, cure, and education of helpless and crippled children.

The Children's Memorial Hospital, 707 Fullerton Avenue, affiliated with the University of Chicago, has 264 beds.

STAFF OF THE CHILDREN'S MEMORIAL HOSPITAL

ATTENDING STAFF

In Medicine: Dr. Joseph Brennemann, Chief of Staff. Drs. I. A. Abt, Archibald Hoyne, C. A. Aldrich, Louis D. Minsk, Gustav Kaufmann, Sigurd H. Kraft, John L. Reichert, Julius Rhodes, J. H. Wallace, A. J. Weigen, Katherine Mayer, Harold A. Rosenbaum, Alvah N. Newcomb, M. Zeisler, E. T. McEnery, W. C. McKee, G. F. Munns, Mila I. Pierce, Clara M. Davis, S. Gibson, J. A. Bigler, Eva J. Line, H. F. Meyer, Mary H. Pope, Morley D. McNeal, Elizabeth A. Bergner, Harry Hadley Boyle, Harry Leslie Faulkner, F. B. Sullivan, N. T. Welford, Joseph A. Forbich, G. Eisenberg, R. F. Grissom, R. H. Sykes, M. L. Spivek, R. E. Williams, M. I. Vinnecour, E. W. Beasley, A. M. Puris, Willie Mae Clifton, L. M. Hardy, Beatrice O. Jones, A. L. Shafton, Vida B. Wentz, Charlotte J. Coombs, F. F. De Metrovich, M. M. Steiner, Elfriede Horst, William W. Swanson.

In Neurology: Dr. Douglas N. Buchanan, Bert I. Beverly.

In Dermatology: Dr. James R. Webster.

In Allergy: Drs. T. B. Friedman, Helen C. Hayden, Louise O. Kappes.

In General Surgery: Drs. Albert H. Montgomery, John A. Graham, Jay Ireland, J. J. Mussill, W. J. Potts, Stanley E. Lawton, Arthur E. Diggs.

In Orthopedics: Drs. Fremont A. Chandler, C. N. Pease, Ferdinand Seidler, John R. Norcross.

In Oral Surgery: Dr. L. W. Schultz.

In Neuro-Surgery: Dr. P. C. Bucy.

In Urology: Drs. H. L. Kretschmer, K. E. Barber, Norris J. Heckel.

In Ophthalmology: Drs. Richard C. Gamble, Elmer A. Vorisek, George P. Guibor, Roy O. Riser, Palmer Good.

In Otolaryngology: Drs. G. S. Livingston, Maurice H. Cottle, G. J. Greenwood, J. C. Vermeren, N. D. Fabricant, Fritz H. Borg.

In Bronchology: Drs. Paul H. Holinger, A. H. Andrews, Jr.

In Roentgenology: Dr. W. E. Anspach.

In Pathology: Dr. William G. Hibbs.

In Dentistry: Drs. C. F. Stine, R. G. Huepel.

In Radiumtherapy: Alexander H. Davis.

RESIDENT STAFF

Out-Patient Department Resident: Dr. Leonard L. Braun.

Medical Residents: Drs. William Deering, James W. Du Shane, Richard L. Marks.

Resident in Pathology: Dr. Wolfgang Zuelzer.

Resident in Orthopedics: Dr. Lyman Smith.

Extra-mural courses.—Through the courtesy of the medical attendants and managing officers of several hospitals and dispensaries within convenient distance of the College, extra-mural clinical courses are offered to the students of Rush, in small groups, and the clinical material available for teaching has thus been greatly augmented. Such courses are offered at the Michael Reese Hospital, Washington Boulevard Hospital, Illinois Charitable Eye and Ear Infirmary, and the Municipal Contagious Disease Hospital.

The Home for Destitute Crippled Children opened its new 100-bed hospital on the University Quadrangles on March 2, 1931. The Home is affiliated with the University of Chicago, and all medical care is provided by the University's medical staff. The building at 1653 Maypole Avenue is used as an out-patient clinic.

The New Provident Hospital was opened on May 15, 1933, in the premises bought from the Chicago Lying-in Hospital and formerly occupied by that hospital. Alterations to meet the requirements of a general service hospital of 110 beds have been made, the "Max Epstein Clinic of Provident," with a capacity of 300 visits a day, has been created for out-patients, adequate laboratory facilities incorporated, and the entire institution fully modernized and equipped. Clinical facilities for the care of the community and for the clinical practice and training of negro physicians and students are provided at a high level of professional and scientific adequacy. The Provident Hospital is actively associated with the University of Chicago.

ALUMNI ASSOCIATION

The Alumni Association of Rush Medical College, which is a part of the University of Chicago Alumni Association, holds yearly meetings. These meetings occur on the date of the Summer Convocation in June. All graduates of the College in good standing are eligible to membership, which can be obtained by the payment of two dollars, the annual dues. The officers for the year ending July 1, 1940, were as follows:

OFFICERS

President.....Frederick B. Moorehead, '06, Chicago
First Vice-President.....Waltman Walters, '20, Rochester, Minn.
Second Vice-President.....George M. Curtis, '21, Columbus, Ohio
Third Vice-President.....Fred M. Smith, '14, Iowa City, Iowa
Necrologist.....Frank W. Allin, '05, Chicago
Secretary-Treasurer.....Carl O. Rinder, '13, Chicago
Directors for Three Years.....Carl W. Apfelbach, '22, Chicago; Harry A. Oberhelman, '21, Chicago
Directors for Two Years.....Willis J. Potts, '24, Oak Park; Albert H. Montgomery, '07, Chicago
Directors for One Year.....Lee C. Gatewood, '11, Chicago; Aaron Arkin, '12, Chicago
Delegates to Alumni Council.....W. A. Thomas, '16, Chicago; Richard W. Watkins, '25, Chicago; Clayton J. Lundy, '27, Chicago

DEGREES CONFERRED, 1939–40

MASTER OF SCIENCE IN THE MEDICAL SCIENCES

June, 1939

Sam Berkman.....Bacteriology and Parasitology
Leonard Alvin Stine.....Pathology

August, 1939

Evelyn Lenore Oginsky.....Bacteriology and Parasitology
José Oliver-Gonzales.....Bacteriology and Parasitology
George Neil Stewart.....Physiology
Phoebe Howell Walker.....Bacteriology and Parasitology

March, 1940

Martha Janota.....Bacteriology and Parasitology

RUSH MEDICAL COLLEGE OF THE UNIVERSITY OF CHICAGO

DEGREE OF DOCTOR OF MEDICINE

Conferred on the basis of four years of medical work.

AT THE CLOSE OF THE SPRING QUARTER JUNE 13, 1939

Frank William Bailey A.B., University of Manitoba, 1923 A.M., *ibid.*, 1929	
Norman John Barnstein S.B., University of Wisconsin, 1936 S.M., *ibid.*, 1937	Madison Methodist Hospital, Madison, Wis.
Wilbur George Braham	Kansas City General Hospital, Kansas City, Mo.
Ralph Gordon Brown A.B., Dartmouth College, 1936	
Edward E. Cannon S.B., University of Chicago, 1937	Charity Hospital, New Orleans, La.
James Webb Chambers S.B., Beloit College, 1935	Mercy Hospital, Des Moines, Ia.
Walter Everett Chase A.B., Dartmouth College, 1936	Mary Hitchcock Memorial Hospital, Hanover, N.H.
Joseph Conway S.B., University of Chicago, 1928	Illinois Central Hospital, Chicago
Walter Charles Dailey A.B., Minot State Teachers College, 1930 S.B., University of North Dakota, 1937	St. Joseph's Hospital, St. Paul, Minn.
Bernard Tetlow Daniels A.B., Yankton College, 1935 S.B., University of South Dakota, 1937	Denver General Hospital, Denver, Colo.
James John DeRoos A.B., Morningside College, 1935 S.B., University of South Dakota, 1937	Denver General Hospital, Denver, Colo.
Jack Carl Dysart A.B., Oklahoma City University, 1935	St. Louis City Hospital, St. Louis, Mo.
Preston Blair Ellsworth S.B., University of Chicago, 1936	Illinois Central Hospital, Chicago
Oscar Louis Entin S.B., University of Chicago, 1936	Cook County Hospital, Chicago
Barton Maxwell Eveleth A.B., Stanford University, 1935	San Diego County Hospital, San Diego, Calif.
Hubert Farber Flannery S.B., Jamestown College, 1935 S.B., University of North Dakota, 1937	St. Joseph's Hospital, St. Paul, Minn.
Richard Aldrich Forney A.B., University of California, 1935	Ancker Hospital, St. Paul, Minn.
George Laurance Gill A.B., Sterling College, 1935	St. Francis Hospital, Evanston, Ill.
Ralph Roy Ginsberg S.B., University of Wisconsin, 1935 S.M., University of Chicago, 1937	Michael Reese Hospital, Chicago

Bearl L. Ginsburg	Mt. Sinai Hospital, Milwaukee, Wis.
Robert Charles Greenwood S.B., University of Chicago, 1937	White Cross Hospital, Columbus, Ohio
Helen Hardenbergh S.B., University of Wisconsin, 1929 A.M., Columbia University, 1932	Children's Hospital, San Francisco, Calif.
Gilbert Stanley Hardie	
René Hardré Bachelier ès Lettres, Université de Paris, 1934 Bachelier ès Sciences, *ibid.*, 1934	Presbyterian Hospital, Chicago
Irving David Harris	Cook County Hospital, Chicago
Leo Rogers Hawkes S.B., Utah State Agricultura l College, 1935	Latter Day Saints Hospital, Salt Lake City, Utah
William John Hawkins S.B., Creighton University, 1937	Southern Pacific General Hospital, San Francisco, Calif.
Edward Henry Heneveld A.B., Hope College, 1935	Harper Hospital, Detroit, Mich.
Francis Willard Hennings A.B., University of North Dakota, 1936 S.B., *ibid.*, 1937	Tacoma General Hospital, Tacoma, Wash.
Hiram David Hilton A.B., Amherst College, 1935	Presbyterian Hospital, Chicago
Von Garn Holbrook A.B., University of Utah, 1935	Illinois Central Hospital, Chicago
Martin Ernest Janssen A.B., Wartburg College, 1935 S.B., University of North Dakota, 1937	St. Joseph's Hospital, St. Paul, Minn.
Chester Thomas Johns A.B., University of Utah, 1933	Dee Memorial Hospital, Ogden, Utah
Byrum Edwin Johnson A.B., University of Nebraska, 1932	Kings County Hospital, Brooklyn, N.Y.
Stephen Kaimmer	Kansas City General Hospital, Kansas City, Mo.
Francis Bacon Kelly A.B., West Virginia University, 1925 S.B., *ibid.*, 1937	Illinois Central Hospital, Chicago
Victor Kiarsis A.B., Dartmouth College, 1936	Presbyterian Hospital, Chicago
Roy George Klocksiem A.B., Western Union College, 1934 S.B., University of South Dakota, 1937	Iowa Methodist Hospital, Des Moines, Iowa
Maria Kraus Kramer	Women's and Children's Hospital, Chicago
Philip Kramer	Cook County Hospital, Chicago
John Joseph Lawless S.B., University of Minnesota, 1931 A.M., *ibid.*, 1931 Ph.D., *ibid.*, 1934	
Florence Eileen Lawson S.B., University of Chicago, 1937	Wesley Memorial Hospital, Chicago
Elliot Burns Lee S.B., Utah State Agricultural College, 1935	Alameda County Hospital, Oakland, Calif.
Alfred Edward Lukasek S.B., University of Chicago, 1938	
Donald LeRoy Martinson A.B., St. Olaf College, 1934	Harper Hospital, Detroit, Mich.
Frank McCarry	Flower Fifth Avenue Hospital, New York, N.Y.

Rosemary Nelson	New England Hospital for Women and Children, Boston, Mass.
Robert John Neufeld S.B., St. Ambrose College, 1937	Mercy Hospital, Chicago
Arthur Gebhard Nugent A.B., University of North Dakota, 1936 S.B., *ibid.*, 1937	Ancker Hospital, St. Paul, Minn.
John Raymond Ong, Jr. S.B., Northwestern University, 1935	Presbyterian Hospital, Chicago
Louis Scowcroft Peery A.B., University of Utah, 1935	Charity Hospital, New Orleans, La.
Willard Marvin Peterson A.B., University of North Dakota, 1936 S.B., *ibid.*, 1937	St. Vincent's Hospital, Portland, Ore.
Joseph Michael Plestina	Evangelical Hospital, Chicago
Robert Morse Potter A.B., Williams College, 1935	St. Luke's Hospital, Chicago
Allen Rabin A.B., University of Wisconsin, 1935 A.M., *ibid.*, 1936	Lutheran Deaconess Hospital, Chicago
James Howard Rasmussen A.B., University of Utah, 1935	Dee Memorial Hospital, Ogden, Utah
Robert Frazer Rushmer S.B., University of Chicago, 1936	St. Luke's Hospital, San Francisco, Calif.
Louis Albert Sass S.B., University of Chicago, 1936	Evangelical Hospital, Chicago
Charles Arthur Schiff S.B., University of Chicago, 1938	Michael Reese Hospital, Chicago
Howard Bruce Shreves S.B., University of South Dakota, 1936	Cook County Hospital, Chicago
Ronald Perry Smith S.B., University of Chicago, 1937	Kings County Hospital, Brooklyn, N.Y.
John Robert Snavely A.B., Grinnell College, 1935	Charity Hospital, New Orleans, La.
Charles Gilbert Steinke	Washington Boulevard Hospital, Chicago
Everett Lloyd Sundquist A.B., Minot State Teachers College, 1930 S.B., University of North Dakota, 1937	Good Samaritan Hospital, Portland, Ore.
Frank Henry Thone A.B., University of Utah, 1935	Huntington Memorial Hospital, Pasadena, Calif.
Luis Arsenio Vallecillo S.B., University of Chicago, 1937	St. Mary's Hospital, Detroit, Mich.
Paul Anton Van Pernis A.B., Hope College, 1935	St. Mary's Hospital, Grand Rapids, Mich.
John Coburn Whittier S.B., University of Chicago, 1936	Augustana Hospital, Chicago
Irwin Floyd Winter A.B., Huron College, 1935 S.B., University of South Dakota, 1937	Washington Boulevard Hospital, Chicago
Charles Arthur Woerner S.B., University of Chicago, 1932 Ph.D., *ibid.*, 1937	Marine Hospital, Seattle, Wash.
Emma Gibson Work S.B., Monmouth College, 1935	
Anthony Cyril Yerkovich S.B., Fordham University, 1935	Charity Hospital, New Orleans, La.
Vern Lauer Zech S.B., University of South Dakota, 1937	Welfare Hospital, New York, N.Y.

AT THE CLOSE OF THE SUMMER QUARTER
AUGUST 25, 1939

Erwin Otto Krausz
Ph.D., University of Czernowitz (Rumania), 1910

Wilfred Eugene Major — Wesley Memorial Hospital, Chicago
S.B., Carroll College, 1935

Wilbur Furse Potter
A.B., University of Kansas, 1925
A.M., *ibid.*, 1927
Ph.D., *ibid.*, 1930

AT THE CLOSE OF THE AUTUMN QUARTER
DECEMBER 19, 1939

Jackson Delos Beatty
S.B., University of Chicago, 1935

John Edward Patrick Hyland
S.B., University of North Dakota, 1935

Harold Howorth Was — Augustana Hospital, Chicago

AT THE CLOSE OF THE WINTER QUARTER
MARCH 15, 1940

Leonard Albert Barrow — Illinois Central Hospital, Chicago
S.B., University of Washington, 1933

Albert Seward Black, Jr. — Presbyterian Hospital, Chicago
S.B., University of Washington, 1937

Helen Blake Carlson
S.B., University of Chicago, 1935
Ph.D., *ibid.*, 1939

Ben David Chinn
Ph.B., University of Chicago, 1928
Ph.D., *ibid.*, 1935

Sam Spiro Chrisos — Evangelical Hospital, Chicago
S.B., University of Chicago, 1937

Frederic Augustus dePeyster — Presbyterian Hospital, Chicago
A.B., Williams College, 1936

William Arch Dorsey — Good Samaritan Hospital, Cincinnati, Ohio
A.B., Western Reserve University, 1936

Allen Miller Dyer, Jr. — Illinois Central Hospital, Chicago
A.B., West Virginia University, 1936
S.B., *ibid.*, 1938

Frank Jefferson Farley — Tampa Municipal Hospital, Tampa, Fla.
S.B., University of Washington, 1936

Otis Rhanor Farley — Cook County Hospital, Chicago
A.B., University of California, 1933

Gene William Farthing
A.B., University of Missouri, 1936
S.B., *ibid.*, 1938

Virginia Maria Ferrara — St. Anthony de Padua Hospital, Chicago
A.B., West Virginia University, 1937
S.B., *ibid.*, 1938

Frank Albert Hill — Milwaukee County Hospital, Wauwatosa, Wis.
S.B., University of Wisconsin, 1938

Louis Magnus Marks — West Suburban Hospital, Oak Park, Ill.
S.B., University of Chicago, 1937

Howard Lloyd Miller S.B., University of Chicago, 1939	Illinois Central Hospital, Chicago
Della Moussa-George S.B., University of Chicago, 1934	
Donald Emmit Nelson S.B., University of Wisconsin, 1937	Madison General Hospital, Madison, Wis.
Adolph Martin Nielsen A.B., University of Utah, 1937	Salt Lake County General Hospital, Salt Lake City, Utah
Julie Etta Olentine S.B., Northeastern State Teachers College (Tahlequah, Okla.), 1936	St. Anthony de Padua Hospital, Chicago
Irvin Samuel Pilger A.B., University of Utah, 1936	Dee Memorial Hospital, Ogden, Utah
John Bernard Ryan S.B., University of South Dakota, 1937	Kansas City General Hospital, Kansas City, Mo.
Chester Arthur Sattler A.B., Yankton College, 1936 S.B., University of South Dakota, 1938	
Vincent Joseph Schilleci A.B., University of Alabama, 1937	Hillman Hospital, Birmingham, Ala.
Kazimer B. Skubi S.B., University of Washington, 1932	Hospital for the Women of Maryland, Baltimore, Md.
Samuel Wayne Smith S.B., Utah State Agricultural College, 1936	Emanuel Hospital, Portland, Ore.
Alfons Fabian Tipshus S.B., University of Chicago, 1937	St. Luke's Hospital, San Francisco, Calif.
Richard Culver Vanderhoof A.B., Colorado College, 1931	Good Samaritan Hospital, Cincinnati, Ohio
Wayne Won Wong A.B., University of Hawaii, 1936	Cook County Hospital, Chicago

THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

DEGREE OF DOCTOR OF MEDICINE

June 1939

Ruth Irene Barnard
Oscar Arnold Billeter
Robert Ela Bowen
Norris L Brookens
Charles Wendell Burt
Edward Hays Camp
Robert Zane Collings, Jr.
Elmer Ernest Cooper
William Dewey Davis
James Ford Donnelly, Jr.
Arthur Herrmann Downing
Sydney Kenneth Edwards
John Harry Gifford
Edward Wesley Gray
Elmer Walter Haertig
George Hartley, Jr.
Leon Orris Jacobson
Victor Einar Johnson
Abraham Judah Kauvar
Aaron Kellmer
Ralph Emile Kirsch
Elias Edwin Long
Clarice Louise McDougall
Dale Veo Moen
Ruth Elizabeth Moulton
Frederick Mitchum Owens, Jr.
John Bennett Rowe
Raymond Serge Roy
Thomas Watson Sherman
Elizabeth Francis Vaughan
Walter Volke
Robert Warner

August, 1939

Walter E. Hamburger

December, 1939

John Morgan Hammer
Robert Charles Hunter
Laurence Sherman Jennings
Albert Kraus
Bertrand Wiley Meyer
William Wallace Scott

March, 1940

Philip Johnston Clark
Frank Michael Gatto
Violet Olive Horner
Roger Sylvester Morris, Jr.

DEGREE OF DOCTOR OF PHILOSOPHY IN THE MEDICAL SCIENCES

June, 1939

Ruth Eleanor Cortell.....Physiology
George Hartley, Jr.....Pathology
Walter Hugh Hoskins.....Biochemistry
Benjamin Libet.....Physiology
Robert Sterling Teague, Jr.....Pharmacology
Milton John Vander Brook.....Pharmacology

August, 1939

Harry Davis Bruner.....Physiology
Sarah Elizabeth Stewart.....Bacteriology and Parasitology

December, 1939

John Stone Evans.....Biochemistry
Gerald Anderson Fostvedt.....Pharmacology
Kathryn Knowlton.....Biochemistry
Frieda Irene Panimon.....Physiology
Harvey M. Schamp.....Physiology
Herman Michael Serota.....Physiology
John Anthony Vaichulus.....Pharmacology
Grace Esther Wertenberger.....Physiology

March, 1940

Robert Venable Brown.....Physiology
David Barrett Clark.....Anatomy
Edward Eagle.....Physiology
Harold Rawson Reames.....Bacteriology and Parasitology
Oscar Sugar.....Physiology

LIST OF STUDENTS

I. THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

The following list includes only those students who were in attendance during one or more quarters during the academic year 1939–40.

NOTES.—The naming of a degree not followed by the name of an institution in parentheses is understood to mean a degree conferred at the University of Chicago.

In cases in which no institution is named, it is understood to mean that the student began his college career at the University of Chicago.

In cases in which an institution, but no degree, is mentioned, it is understood that the student did his premedical work in the institution named.

In cases in which no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U. = University; C. = College; S. = School; Inst. = Institute.

Period of Residence. *s* = Residence during Summer Quarter, 1939; *a* = during Autumn Quarter, 1939; *w* = during Winter Quarter, 1940; *sp* = during Spring Quarter ,1940.

Starred (*) names indicate clinical students in Albert Merritt Billings Hospital.

Adatto, Carl Perahya, *a*, *w*, *sp*, Seattle, Wash. S.B. (U. of Washington) '38.
Adland, Marvin, *a*, *w*, *sp*, Chicago.
Ahern, James Joseph, *a*, Bellingham, Wash. S.B. (U. of Washington), '38.
Allard, Louis Clayton, *a*, *w*, *sp*, Billings, Mont. S.B. '40.
Armstrong, Catherine Audrey, *a*, *w*, *sp*, Ponce City, Okla. A.B. (U. of Oklahoma) '38.
*Arnold, George Francis, *a*, *w*, Darby, Pa. A.B. (Dartmouth C.) '37.
*Askren, Edward Leroy, Jr., *a*, *w*, *sp*, Manhattan, Kan. S.M. (Kansas State Teachers C.) '37.
Ayers, John Martin, *a*, *w*, *sp*, Grangeville, Idaho. U. of Idaho.
Baker, Mary Grace, *a*, *w*, *sp*, Uniontown, Pa. A.B. (Manchester C.) '39.
Barker, Wayne, *sp*, New York, N.Y.
Barris, Ralph Waldo, *s*, *a*, *w*, *sp*, Chicago. Ph.D. (Northwestern U.) '34.
Barry, George Richard, *s*, *a*, *w*, *sp*, Chicago.
Bartley, Harold, *a*, *w*, *sp*, Great Falls, Mont. Montana State U.
*Bassham, Byron Earl, *s*, *a*, *w*, *sp*, Springfield, Mo. A.B. (Southwest Missouri State Teachers C.) '36.
*Baugher, John Oliver, *s*, *a*, *w*, *sp*, Chicago. S.B. '37.
*Bayliss, Milward, *s*, Baltimore, Md. Ph.D. (U. of Minnesota) '34.
*Beal, John Mann, Jr., *a*, *w*, *sp*, Chicago. S.B. '37.
Beattie, George Chapin, *a*, *w*, *sp*, Bowling Green, Ohio. A.B. (Bowling Green State C.) '39.
Becker, Robert Mettler, *a*, *w*, *sp*, Pasadena, Calif. A.B. (Oberlin C.) '39.
Beilfuss, Frank Harrison, *a*, *w*, *sp*, Chicago. S.B. '39.
Bennett, Hugh DeEvereaux, *a*, *w*, *sp*, Chicago.
Bennett, Victor Miles, *sp*, Jackson, Mich. S.B. '29.
*Berg, Owen Charles, *s*, *a*, *w*, *sp*, Chicago. S.B. '36.
Berlin, Richard, *a*, *w*, *sp*, Chicago. A.B. (Columbia U.) '38.
*Bertrand, John Joseph, *a*, *w*, San Francisco, Calif. A.B. (U. of California) '37.
Bethard, William Frederick, *a*, *w*, *sp*, San Diego, Calif. S.B. '40.
Bielinis, Peter Louis, Jr., *s*, *a*, *w*, *sp*, Chicago. S.B. '38.

Bigelow, Robert Ramsey, *a, w, sp,* Chicago.
*Billings, Carl Emery, *a, w, sp,* Barrington. S.B. '39.
Blakinger, Leo Anthony, *a, w, sp,* Aurora. Ripon C.
Blank, Harvey, *a, w, sp,* Chicago. S.B. '39.
Blattner, Milton R., *s, a, w, sp,* Kuna, Idaho. S.B. (U. of Idaho) '38.
*Blomquist, Edward Theodore, *a, w, sp,* DeKalb. B.E. (Northern Illinois State Teachers C.) '31.
*Bolyard, Nelson Wayne, *s, a, w, sp,* Chicago. Ph.D. (U. of Wisconsin) '28.
Bolz, John Arnold, *sp,* Elgin.
Bond, Alan Brandon, *a, w, sp,* Chicago.
*Bond, Glenn Carl, *s,* Lawrence, Kan. Ph.D. (U. of Kansas) '38.
Bond, William Holmes, *a, w, sp,* Oak Park. S.B. '40.
Bonfiglio, Michael, *a, w, sp,* Milwaukee, Wis.
Bradshaw, Donald Gregory, *a, w, sp,* San Antonio, Fla. S.B. (U. of Florida) '32.
Brighton, Charles Edwin, *a, w, sp,* Coffeyville, Kan. S.B. '39.
*Brown, Helen Mary, *a, w, sp,* Joliet. S. M. (U. of Minnesota) '36.
Brown, William Lee, Jr., *s, a, w, sp,* Flossmoor.
Brucer, Marshall Herbert, *s, a, w, sp,* Chicago. S.B. '40.
Brugman, Robert Barry, *a, w, sp,* Hinsdale.
Brunse, Anthony John Martin Denis, *s, a, w, sp,* Brooklyn, N.Y. A.B. (Columbia U.) '38.
*Buchanan, Donald Landis, *a, w, sp,* Chicago. S.B. (North Dakota State Agricultural C.) '37.
Bunce, Paul Leslie, *a, w, sp,* Omaha, Nebr. A.B. (Oberlin C.) '38.
*Cahoon, Daniel Hedgcoxe, *s,* Roswell, N.M. A.B. (Stanford U.) '34.
Campbell, James Allan, *a, w, sp,* Rochelle. A.B. (Knox C.) '39.
Carpenter, Richard Everett, *a, w, sp,* Swanee, Okla. A.B. (U. of Colorado) '39.
Casey, Byron Laurence, Jr., *a, w, sp,* Park Ridge. S.B. (U. of Notre Dame) '39.
Chen, Graham Mien, *a, w, sp,* Peiping, China. Sc.D. (U. of Michigan) '30.
Chilman, Elsie Helen, *a, w, sp,* Hoquiam, Wash. S.M. (U. of Washington) '38.
Christenson, Paul Frederick, *a, w, sp,* Wellesville, Utah. S.B. (Utah Agricultural C.) '38.
*Clark, Philip Johnston, *s, a, w,* Chicago. S.B. '37.
Conklin, Karl Peter, *a, w, sp,* Bozeman, Mont. A.B. (Montana State C.) '37.
*Cook, Richard, *a, w, sp,* Chicago. S.B. '38.
*Coppock, H. Cary, *a, w, sp,* Chicago. S.B. '38.
Cottrell, Frederick William, *a, w, sp,* Centerville, Utah. U. of Utah.
Courtney, Marvin Dale, *a, w, sp,* Spokane, Wash. S.B. (U. of Washington) '39.
Cox, Walter Bedford, *sp,* Doniphan, Neb.
Currier, Richard Keith, *a, w, sp,* Elmwood. A.B. (Knox C.) '38.
Cutler, Garnet Campbell, *a, w, sp,* W. Lafayette, Ind. S.B. (Purdue U.) '39.
Daskal, Herzl Marvin, *s, a, w, sp,* Chicago.
Davis, Frank William, *a, w, sp,* Chicago. S.B. '39.
Davis, Oscar Theodore, *a, w, sp,* Hopkinsville, Ky. U. of Kentucky.
Davis, Walter Douglas, *a, w, sp,* Chicago. A.B. (Ohio Wesleyan U.) '39.
DePree, Harold Everhard, *a, w, sp,* Chicago. A.B. (Hope C.) '38.
Dibble, Howard Carr, *a, w, sp,* Portage, Wis. S.B. (Yale U.) '38.
Dodds, Richey Floyd, *a, w, sp,* Starkville, Miss. S.B. (Mississippi State C.) '38.

*Dohrmann, George Otto Ferdinand, *s, a, w, sp*, Chicago. S.B. '39.
Domke, Herbert Reuben, *s, a, w, sp*, Chicago. S.B. '40.
*Donaldson, Lilian, *a, w, sp*, Chicago. A.M. (U. of Kansas) '35.
Downing, Charles Frederick, *a, w, sp*, Brockway, Mont. S.B. '39.
Dwyer, Thomas Francis, *a, w, sp*, Orange, N.J. S.B. (Seton Hall C.) '36.
Ebert, Robert Higgins, *w, sp*, Chicago. S.B. '36.
Emery, Frederic Barrett, *a, w, sp*, Seneca, Kan. S.B. '40.
*Fareed, Omar John, *a, w, sp*, Glendale, Calif. S.B. '37.
Finney, Joseph Bertrand, *a, w, sp*, Spokane, Wash. S.B. '39.
Fish, William Deering, *a, w, sp*, Evanston. Northwestern U.
Fitzgerald, Robert Edward, *sp*, Yankton, S.D.
*Fortmann, Daniel John, *s, w, sp*, Pearl River, N.Y. A.B. (Colgate U.) '36.
Fostvedt, Gerald, *w*, Chetek, Wis. Ph.D. '39.
*Freilich, Joseph, *s, a, w, sp*, Chicago. S.B. '38.
Freilich, Marvin Stanley, *a, w, sp*, Chicago. S.B. '39.
Fricke, Albert Frederick, *a, w, sp*, Chicago. S.B. '39.
Fritz, James McIlroy, *a, w, sp*, Dubuque, Iowa. S.B. '39.
Fullenwider, Charles Glendenning, *a, w, sp*, Muskogee, Okla. S.B. (U. of Oklahoma) '38.
Furmanski, Anthony Raymond, *a, w, sp*, Bessemer, Mich.
Gassler, Robert Karl, *a, w, sp*, Chicago. A.B. (Oberlin C.) '39.
*Gatto, Frank Michael, *s, a, w*, Pittsburgh, Pa. Ph.D. (U. of Pittsburgh) '29.
*Gezon, Horace Martin, *a, w, sp*, Grand Rapids, Mich. A.B. (Calvin C.) '38.
*Gibson, Ira Malcolm, *s, sp*, Emory University, Ga. A.M. (Indiana U.) '35.
*Gingrich, Wendell, *s*, Galveston, Texas. Sc.D. (Johns Hopkins U.) '30.
*Goldinger, James Marvin, *a, w, sp*, Chicago. S.B. (Pennsylvania State C.) '37.
*Goldstein, Stanton Louis, *a, w, sp*, Chicago. S.B. '38.
*Gray, Frank Steve, *a, w, sp*, Litts Falls, N.Y. S.B. '38.
Gray, Paul Holley, *a, w, sp*, Chicago. S.B. '39.
Greer, Charles William, *s*, Charleston. M.B.A. (Harvard U.) '34.
Hafer, Russell Lawrence, *a, w, sp*, Argo. S.B. '39.
*Hager, Dale Carroll, *a, w, sp*, Lincoln, Neb. S.B. '38.
*Hair, Benjamin Morton, *a, w, sp*, Chicago. A.B. (Dartmouth C.) '36.
Hall, Robert Preston, *a, w, sp*, Sunnyside, Wash. S.B. '39.
*Hamburger, Walter Wile, Jr., *a, w, sp*, Chicago. S.B. '37.
*Hammer, John Morgan, *s, a*, Chicago. S.B. (Michigan State C.) '36.
Handy, George Harmon, *a, w, sp*, Kellogg, Idaho. U. of Idaho.
*Hawk, Walter Duncan, *s, a, w, sp*, Pasadena, Calif. A.B. (Stanford U.) '29.
*Heinen, Helen Dickerson, *s, a, w, sp*, Chicago. S.M. (U. of Illinois) '32.
*Hirschberg, Cotter, *a, w, sp*, Chicago. A.B. (Calvin C.) '38.
Hite, Katherine Eileen, *s, w, sp*, Shelbyville. Ph.D. '38.
Hobson, Lawrence Bennett, *a, w, sp*, Fort Smith, Ark. A.B. (U. of Arkansas) '35.
*Hodges, Clarence Vernard, *s, a, w, sp*, Lead, S.D. Iowa State C.
*Hoffman, Burton Louis, *s, a, w, sp*, Cincinnati, Ohio. S.B. '38.
Hohm, Paul Harrold, *a, w, sp*, Huron, S.D. A.B. (Huron C.) '39.
*Hohm, Theodore Arthur, *a, w, sp*, Huron, S.D. A.B. (Huron C.) '37.
Holaday, Duncan Asa, *s, a, w, sp*, Highland Park, N.J. S.B. '40.
Hopple, Theron Lingard, *a, w, sp*, Toledo, Ohio. S.B. (C. of the City of Toledo) '38

*Horner, Violet Olive, *s, a, w*, Hilo, T.H. A.B. (U. of Hawaii) '36.
Hubbard, Kenneth Tower, *s, a, w, sp*, West Allis, Wis. A.B. (Oberlin C.) '33.
*Hunter, Robert Charles, *s, a*, Chicago. A.B. (Harvard U.) '36.
Hunter, William Strobel, *s, a, w, sp*, Charleston, W.Va. S.B. (U. of Virginia) '36.
Ihrke, Royal Ernest, *a, w, sp*, Chicago. S.B. '39.
Irwin, John Reynolds, *s, a, w, sp*, Murtaugh, Idaho. A.B. (Gooding, C.) '35.
Ivanovich, Michael Miles, *s*, Pittsburgh, Pa. S.B. (U. of Pittsburgh) '36.
*Jennings, Sherman, *s, a*, Berkeley, Calif. S.B. '37.
*Johns, Clara Ritchie, *a, w, sp*, Hyatsville, Md. A.B. (Rockford C.) '37.
Johnson, Alvin, Jr., *s, a, w, sp*, New Orleans, La. S.B. '39.
Johnson, Frank Waters, *a, w*, Chicago.
Johnson, Herbert Clarence, *a, w, sp*, Racine, Wis.
Johnson, Maxwell Allis, *sp*, Chicago.
Johnson, Miriam, *a, w, sp*, San Juan, P.R. Washington Square College.
*Jones, William Norman, *a, w, sp*, Anderson, Ind. S.B. '37.
*Jordan, Prescott, Jr., *s, a, w, sp*, Chicago. S.B. '38.
*Kahn, Jack Louis, *a, w, sp*, Chicago. S.B. '37.
Kinports, Edward Bachus, *a, w, sp*, International Falls, Minn. A.B. (U. of Minnesota) '37.
*Kligerman, Charles, *a, w, sp*, Atlantic City, N.J. A.B. (Dartmouth C.) '37.
*Knott, Elizabeth May, *s, a, w, sp*, Chicago. S.M. (U. of Wisconsin) '30.
*Kraus, Albert, *s, a*, New York, N.Y. S.B. '36.
Kuiper, Klaire Van Zanten, *a, w, sp*, Grand Rapids, Mich. Calvin C.
Laestar, Carl, *s, sp*, Chicago. S.B. (Central Y.M.C.A. C.) '38.
*Lambert, Richard Gustaph, *s, a, w, sp*, Los Angeles, Calif. S.B. '38.
Lane, Margaret Mary, *a, w, sp*, Chicago. U. of Illinois.
Larrabee, John Austin, *a, w, sp*, Yankton, S.D. A.B. (U. of Nebraska) '38.
Lazarow, Arnold, *s*, Detroit, Mich. S.B. '37.
*Lazarski, Karl Malcolm, *a, w, sp*, Chicago. S.B. '38.
Lefforge, Edward Everett, *a, w, sp*, North Manchester, Ind. Manchester C.
*Lester, Thomas William, Jr., *a, w, sp*, Chicago. S.B. '38.
*Levey, Milton Frederick, *a, w, sp*, New Orleans, La. S.B. '39.
*Lewis, Will, *a, w, sp*, Chicago. S.B. '38.
*Lochman, David Jerome, *a, w, sp*, Chicago. S.B. '38.
Loewy, Arthur, *sp*, Chicago. S.B. '40.
Logan, Arch Hodge, Jr., *a, w, sp*, Rochester, Minn. A.B. (Washington & Jefferson C.) '38.
Lynn, Frank Wisner, *a, w, sp*, Chicago. A.B. (Columbia C.) '38.
*Macarthy, Gerald Bullard, *a, w, sp*, San Francisco, Calif. A.B. (U. of California) '36.
Mack, Irving, *a, w, sp*, Chicago. S.B. '39.
Magdsick, Carl C., Jr., *a, w, sp*, Charles City, Iowa. A.B. (Grinnell C.) '39.
*Majarakis, James, *s, w, sp*, Chicago. S.B. '37.
Marshall, Charles Emmett, *s*, Chicago. S.B. '38.
*Maxwell, Harry Pepper, *a, w, sp*, Flossmoor. S.B. '38.
McAuley, Arthur Addison, *a*, Wichita, Kan. A.B. (Park C.) '38.
McClintock, James Albertine, Jr., *a, w, sp*, Lafayette, Ind. S.B. (Purdue U.) '38.
McDonald, Donald Fiedler, *a, w, sp*, Chicago Heights.
McIntyre, Donald Murdoch, *a, w, sp*, St. John, Wash. A.B. (U. of Washington) '39.

McKay, Richard Vincent, Jr., *a, w, sp*, Dubuque, Iowa. S.B. (U. of Notre Dame) '39.
Meritt, Joseph Edgar, Jr., *s, a, w, sp*, Rhineland, Mo. A.B. (U. of Missouri) '38.
*Meyer, Bertrand W., *s, a*, Chicago. A.B. (U. of Iowa) '33.
Michael, Isaac Eldrew, *s, a, w*, Frankfort, Ind. S.B. '38.
Minard, David, *sp*, Fargo, N.D. Ph.D. '37.
Mitchell, Robert James, Jr., *a, w, sp*, Fresno, Calif. A.B. (Stanford U.) '38.
Molloy, John Madera, *a, w, sp*, Chicago. S.B. '39.
*Monroe, Francis Bruce, *s, a, w, sp*, Iron River, Mich. S.B. '40.
Morgan, Clinton Wilkins, Jr., *a, w, sp*, Lombard. A.B. (Duke U.) '39.
Morris, Robert Roy, *a, w, sp*, San Francisco, Calif. A.M. (Stanford U.) '38.
*Morris, Roger Sylvester, Jr., *s, a, w*, Grosse Pointe, Mich.
Morrissey, Richard Thurl, *a*, Indianapolis, Ind. S.B. (Butler C.) '36.
Moss, William Walter, Jr., *a*, Hopkinsville, Ky. U. of Kentucky.
Neal, William Brannan, Jr., *a, w, sp*, Oak Park. S.B. '39.
Oester, Yvo Thomas, *s, a*, Chicago. Ph.D. '39.
*Olson, Howard David, *a, w, sp*, Denver, Colo. U. of Denver.
*Olsson, Roland Carl Olof, *a, w, sp*, Chicago. S.B. '37.
Osterling, Dale Everett, *s*, Glen Ellyn. A.B. (Ripon C.) '38.
Pace, Joseph Leon, *a, w, sp*, Provo, Utah. A.B. (Brigham Young U.) '38.
*Painter, Robert Clayworth, *a, w, sp*, Dubuque, Iowa. S.B. '38.
Parmelee, Arthur Hawley, Jr., *a, w, sp*, Chicago.
*Paull, Don Richard, *a, w, sp*, Preston, Idaho. S.B. (Utah State Agricultural C.) '37.
Pfeiffer, Charles William, *a, w, sp*, Racine, Wis.
Phillips, James Gartrella, *s*, Moore, Okla. S.M. (U. of Oklahoma) '33.
Powell, Chester Badollet, *a, w, sp*, Chicago.
Pribram, Karl Harry, *s, a, w, sp*, Chicago. S.B. '39.
Ramey, Cash, Jr., *s, a, w, sp*, Clovis, N.M. U. of Illinois.
Ransohoff, Joseph, Jr., *s, a, w, sp*, Cincinnati, Ohio. S. B. (Harvard U.) '38.
*Reames, Harold Rawson, *s*, Grand Ledge, Mich. A.B. (Olivet C.) '35.
*Rehm, Jane Pearce, *sp*, Chicago.
*Rehm, Warren Stacy, *w, sp*, Chicago. Ph.D. (U. of Texas) '35.
*Reid, Robert Wilson, *s, a, w, sp*, Chicago. S.B. '38.
Reinhart, John Belvin, *a, w, sp*, Merrill, Wis. A.B. (Duke U.) '39.
Renner, William Francis, *a, w, sp*, Dorchester, Mass. A.B. (Harvard C.) '37.
Rhomberg, Charlotte, *a, w, sp*, Dubuque, Iowa. S.B. (Clarke C.) '38.
*Richardson, Gene, *s, a, w, sp*, Chicago. S.B. '38.
Robbins, Edward D., *a, w, sp*, Bayonne, N.J. S.B. '39.
Roberts, William Thomas, *a, w, sp*, Buffalo, N.Y. S.B. (Georgetown U.) '37.
Roll, Lewis Robert, *sp*, Frankfort, Ind. S.B. '31.
Rook, Francis LaVerne, *a, w, sp*, Medina, N.Y. Park C.
*Rossman, Isadore, *s*, Chicago. Ph.D. '37.
Rubin, Louis, *a, w, sp*, Rock Falls. S.B. '39.
*Ruggy, George Harris, *s, a, w, sp*, Salem, Ohio. Ph.D. (Ohio State U.) '36.
*Ryan, Albert Richard, *a, w, sp*, Chicago. S.B. '38.
Sandars, Leibert Jovanovich, *s*, Chicago.
Sanders, Reon Harold, *s, a, w, sp*, Laramie, Wyo. S.B. (U. of Wyoming) '39.
Sannan, Hervey John, *a, w, sp*, Anaconda, Mont. A.B. (U. of Montana) '38.
Sawyer, George Franklin, III, *s*, Washington, D.C. A.B. (U. of Colorado) '36.

Schlegel, Henry Edward, Jr., *s, a, w, sp*, Portland, Ore. S.B. (U. of Idaho) '36.
Schlies, Edward William, *s, a, w, sp*, Chicago. S.B. '39.
Schmitz, Robert Henry, *s*, Des Moines, Iowa. Notre Dame U.
Schneider, John Joseph, *sp*, Minneapolis, Minn. S.B. (U. of Minnesota) '37.
*Scott, William Wallace, *s, a*, Philadelphia, Pa. Ph.D. '38.
Seal, Sam Howard, *a, w, sp*, Chicago. S.B. '39.
*Sheeley, William Flavel, *a. w, sp*, Grand Island, Neb. A.B. (Doane C.) '37.
*Sherman, Mary Stults, *a, w, sp*, Chicago. A.M. (Northwestern U.) '35.
Siever, Paul William, *a, w, sp*, Chicago.
Simon, Felix Edward, *a, w, sp*, Riverton, Wyo. S.M. (U. of Wyoming) '37.
*Simpson, William Loyal, *s*, Chicago. Ph.D. '38.
Skinsnes, Olaf Kristian, *a, w, sp*, Honan, China. S.B. (St. Olaf C.) '39.
Sloan, John Walter, *a, w, sp*, Grinnell, Iowa. A.B. (Grinnell C.) '39.
Smith, Ralph Ogilvy, *a, w, sp*, Seattle, Wash. U. of Washington.
*Smith, William Burgett, *a, w, sp*, Grand Ridge. S.B. (Northwestern U.) '35.
Snapp, Robert Harvey, *a, w, sp*, Phoenix, Ariz. S.B. (U. of New Mexico) '38.
Sponsel, Kenath Herrick, *a, w, sp*, Gary, Ind.
*Stare, Frederick John, *a, w, sp*, Madison, Wis. Ph.D. (U. of Wisconsin) '34.
Stenn, Harriett Stricker, *s*, Chicago. S.B. '38.
Stephenson, Earl Stanley, *s, a, w, sp*, Chicago. S.B. '38.
Stewart, John Chester, *a, w, sp*, Thermopolis, Wyo. A.B. (Dartmouth C.) '39.
*Stine, Leonard Alvin, *a, w, sp*, Chicago. S.M. '39.
Stone, William, *a, w, sp*, Brooklyn, N.Y. A.M. (Columbia U.) '33.
*Stormont, Robert Tulloch, *s, a*, LaCrosse, Wis. Ph.D. '39.
Strange, Dempsey Clark, *sp*, Fernwood, Miss.
Straube, Robert Leonard, *a, w, sp*, Chicago. S.B. '39.
*Sweet, Robert Benjamin, *a, w, sp*, Centralia, Wash. S.B. '38.
*Swisher, Forrest Myron, *a, w, sp*, Fargo, N.D. S.B. (North Dakota Agricultural C.) '34.
Tasher, Dean Charles, *a, w, sp*, South Bend, Indiana.
Telfeyan, Sarkis Albert, *s, a, w, sp*, Forest Hills, N.Y. A.B. (Stanford U.) '38.
*Test, Charles Edward, *a, w, sp*, Indianapolis, Ind. A.B. (Princeton U.) '37.
Thomas, Colin Gordon, *a, w, sp*, Monticello, Iowa.
*Thompson, Randall Leslie, *s*, Cleveland, Ohio. Sc.D. (Johns Hopkins) '31.
Thompson, William Harold, *a, w, sp*, Seattle, Wash. A.B. (U. of Washington) '37.
Tobin, John Robert, Jr., *a, w, sp*, Elgin. S.B. (Notre Dame U.) '38.
Trace, Herbert David, *a, w, sp*, Chicago. S.B. '39.
Trayner, Hampton Hill, *a, w, sp*, Idaho Falls, Idaho. S.B. (U. of Idaho) '40.
Tribby, Charles Lindemann, *s*, Peadville, Pa. Antioch C.
*Trotter, Richard Walter, *a, w, sp*, Lake City, Iowa. S.B. '36.
Wahl, Frederick, *a, w, sp*, Chicago. S.B. '39.
*Walcher, Dwain Newton, *a, w, sp*, Nokomis. S.B. '38.
Walker, Lillie Cutlar, *a, w, sp*, Winston-Salem, N.C. Ph.D. (U. of North Carolina) '37.
*Wallace, Mack, *a, w, sp*, Chapel Hill, N.C. A.B. (U. of North Carolina) '35.
Waller, William Henry, *s*, Vermillion, S.D. Ph.D. (Cornell U.) '33.
Walsh, William Martin, *a, w*, St. Louis, Mo. S.B. (Penn C.) '37.
Walter, Robert Charles, *a, w, sp*, Oklahoma City, Okla. S.B. (Purdue U.) '39.
*Walton, Robert Petrie, *s, sp*, University, Miss. Ph.D. (Columbia U.) '29.

*Waters, James Llewellyn, *s, a, w, sp,* Anaconda, Mont. S.B. (Montana State C.) '36
Webster, Frederick Shannon, *s, a, w, sp,* Lincoln, Neb. A.B. (U. of Nebraska) '38.
Webster, William, *sp,* Ionia, Mich.
Weiner, Robert Gordon, *a, w, sp,* Portsmouth, Va.
Weir, Everett George, *s,* Washington, D.C. S.M. '34.
*Westerberg, Martha R., *s, w, sp,* Rockford, A.B. (Rockford C.) '35.
*Wharton, James Dumont, *s, a, w, sp,* Chicago. A.B. (De Pauw U.) '37.
Whitaker, Eugene Giraud, *s,* Chicago. Western Reserve U.
White, Marjorie Inez, *a, w, sp,* New York, N.Y. S.B. '39.
*Whiteley, Edward Jenner, *a, w, sp,* Baker, Calif. Iowa State C.
Whitesel, Glen Martin, *a, w, sp,* Spokane, Wash. S.B. (U. of Idaho) '39.
Wilcox, John Guinan, *s,* Quincy, S.B. '38.
Williams, Charles Francis, *a, w, sp,* Indianapolis, Ind. A.B. (De Pauw U.) '38.
Wilson, Merton Frederick, *a, w, sp,* South Hadley Falls, Mass. S.B. (Massachusetts State C.) '39.
Wimby, Lucius Walker, III, *a, w, sp,* Blue Island. S.B. '40.
Wissler, Robert William, *a, w, sp,* Richmond, Ind. A.B. (Earlham C.), '39.
*Woodard, Don Ernest, *a, w, sp,* Portland, Ore. A.B. (Columbia C.) '36.
Woodward, Edward Roy, *a, w, sp,* Mason City, Iowa. A.B. (Grinnell C.) '38.
Woody, Howard Glenn, *s,* Park Ridge. S.B. (U. of Idaho) '37.
Wright, Vinton Hodge, *s,* Chicago.
*Ziobrowski, Frank George, *a, w, sp,* Johnston, R.I. A.B. (Brown U.) '36.

SPECIAL STUDENTS REGISTERED IN THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

Richard Bachmann
James Ian Baltz
Edward L. Beckman
Frederick R. Bennett
Joachim Billig
Kathleen L. Byers
Kemp G. Cooper
Harry J. Epstein
Dorothy E. Eshbaugh
Edson F. Fowler
Isabelle T. Gadzikowski
Frank C. Golding
James J. Gorham
Leo L. Hardt
Arthur A. Hellbaum
Jesse Hofer
Richard J. Hogan
Bruce D. Kenamore
Audrey Lagerquist
Henri LeClaire
Arthur Marcus
Frank B. McGlone
Joseph Martin Mitrick
Edwin Wales Munson
Matt B. Murfree, Jr.
Henry Niemeyer
Clyde J. Osborne
John Henry Powell
Carl Hirsch Rabinowitz
Pauline Odessa Roberts
Caroline Elizabeth Rockwell
Bernard Rosenak
Harold Scheff
Michael Shutkin
Fred R. Sloan
Malcolm Spencer
Frank Xavier Spera
Robert Carl Steckenrider
Emanuel Szwarcman
James Tesler
Harold L. Thompson
George M. Underwood
Joseph Edward Walther
Alex Zarchy

II. RUSH MEDICAL COLLEGE OF THE UNIVERSITY OF CHICAGO

A. JUNIORS

Ahrlin, Hollis LeRoy, *a, w, sp,* Hattan, N.D. S.B. (Jamestown C.) '34; S.B. (U. of North Dakota) '39.

Alleman, Russell John, *a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '38.

Asahina, George Shoichi, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '33.

Bachman, Lyle, *a, w, sp,* Ogden, Utah. S.B. '38.

Baggenstoss, Osmond Jacob, *a, w, sp,* Dickinson, N.D. A.B. (U. of North Dakota) '39; S.B. (*ibid.*) '39.

Bassett, Louis Herbert, *a, w, sp,* Shelton, Wash. S.B. (U. of Washington) '36.

Beck, Kathryn Elizabeth, *a, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '37.

Belknap, Helen Morrison, *a, w, sp,* Gassaway, W.Va. A.B. (West Virginia U.) '38; S.B. (*ibid.*) '39.

Bjork, Harold A., *a, w, sp,* Enderlin, N.D. A.B. (U. of North Dakota) '38.

Bowen, John M., *a, w, sp,* Burley, Idaho. S.B. (Utah State Agricultural C.) '37.

Brooks, Charles Ernest, *a, w, sp,* Madison, Wis. S.B. (U. of Wisconsin) '39.

Brown, Irving Eugene, Jr., *a, sp,* Woodsville, N.H. A.B. (Dartmouth C.) '38.

Caldwell, Del Wells, *a, w, sp,* Chicago. S.B. (Northwestern U.) '35.

Chock, Philip Wah Hou, *a, w, sp,* Hilo, T.H. A.B. (U. of Kansas) '37.

Christensen, Norman Anton, *a, w, sp,* Brigham City, Utah. S.B. (U. of Utah) '37.

Christoph, Robert Frederick, *a, w, sp,* Orting, Wash. S.B. (Jamestown C.) '37.

Cook, Martin Jan, *a, w, sp,* Lansing, Mich. S.B. (Michigan State C.) '37.

Coon, Julius Mosher, *a,* Chicago. A.B. (Indiana U.) '32; Ph.D. '38.

Coss, James Austin, *a, w, sp,* Sioux City, Iowa. A.B. (Morningside C.) '37; S.B. (U. of South Dakota) '39.

Cottam, Alma, *a, w, sp,* St. George, Utah. A.B. (Brigham Young U.) '36.

Cummins, George Manning, Jr., *a, w, sp,* Davenport, Iowa. S.B. (St. Ambrose C.) '35.

Davis, Joseph Berry, *a, w, sp,* Fond du Lac, Wis. S.B. (U. of Wisconsin) '39.

DeVall, Lois Valberg, *a, w, sp,* Garretson, S.D. A.B. (St. Olaf C.) '37; S.B. (U. of South Dakota) '39.

Eckert, Joseph John, *a, w, sp,* Akron, Ohio. S.B. (Akron U.) '37.

Eissler, Rolf, *a, w, sp,* Chicago. University of Vienna.

Ellison, Adam Brown Curry, *a, w, sp,* Richwood, W.Va. S.B. (West Virginia U.) '39.

Fabric, Clarence C., *a, w, sp,* Milwaukee, Wis.

Fahey, Martin Matthew, *a, w, sp,* Freemansburg, W. Va. A.B. (West Virginia U.) '37; S.B. (*ibid.*) '39.

Farr, Milan Wesley, *a, w, sp,* Oshkosh, Wis. S.B. (U. of Wisconsin) '39.

Franz, Elmer Martin, *a, w, sp,* Marion, S.D. S.B. (U. of South Dakota) '39.

Garr, William Robert, *a, w, sp,* Hiawatha, Utah. A.B. (U. of Utah) '38.

Gebuhr, Carl August, *a, w, sp,* Fond du Lac, Wis. A.B. (U. of Wisconsin) '36.

Good, Ralph Duane, *a, w, sp,* Wilkinsburg, Pa. A.B. (Allegheny C.) '37.

Good, William Oliver, *a, w, sp,* Kansas City, Mo. A.B. (U. of Missouri) '38; S.B. (*ibid*) '39.

Gordon, Sidney B., *a, w, sp,* Ogden, Utah. A.B. (U. of Utah) '39.

Grace, Charles Melvin, *a, w, sp,* Chillicothe, Mo. A.B. (U. of Missouri) '37; S.B. (*ibid*). '39.

Greer, Charles William, *a, w, sp,* Charleston. M.B.A. (Harvard U.) '34; A.B. (Miami U.) '32.
Grossman, Aaron, *a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '35.
Harrison, George Myron, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '38.
Hench, Raymond Nelson, *a, w, sp,* Stockton, Calif. A.B. (C. of the Pacific) '36; S.M. '39.
Hendricks, Roger Cornell, *a, w, sp,* Grand Rapids, Mich. Calvin College.
Hildebrand, George Bernard, *a, w, sp,* Madison, Wis. S.B. (U. of Wisconsin) '37; M.S. (*ibid.*) '38.
Hilkevitch, Alexander, *a, w, sp,* Chicago.
Hurwitz, Sid Psyche, *a, w, sp,* Milwaukee, Wis. S.B. (U. of Wisconsin) '39.
Ivanovich, Michael Miles, *a, w, sp,* Pittsburgh, Pa. S.B. (U. of Pittsburgh) '36.
Kenney, Francis David, *a, w,* Goodland, Ind. Loyola University.
Kobak, Mathew William, *a, w, sp,* Chicago. S.B. '38.
Kraus, Alfred Paul, *a, w,* Chicago.
Lands, Victor Garde, *a, w, sp,* Minneapolis, Minn. A.B. (U. of Minnesota) '37.
Larsen, Loren Joseph, *a, w, sp,* Boise, Idaho. A.B. (U. of Utah) '39.
Lebo, Lester, *a, w, sp,* Newcastle, Pa. S.B. '38.
Lehner, Robert Harold, *a, w, sp,* Princeton, Wis. A.B. (U. of Wisconsin) '38.
Long, Gerald DeWitt, *a, w, sp,* Okemah, Okla. S.B. (U. of South Dakota) '39.
McAnally, Albert Key, *w, sp,* A.B. (U. of North Carolina) '36.
McIntire, Barron Fillmore, *a, w, sp,* Marlboro, N.H. A.B. (Dartmouth C.) '38.
McIntosh, George Frederick, *a, w, sp,* Hoven, S.D. S.B. (U. of South Dakota) '39.
McLaughlin, Robert Joseph, *a, w, sp,* Wausau, Wis. A.B. (U. of Wisconsin) '38.
Mikita, Michael Michaels, *a, w, sp,* Holliday's Cove, W.Va. A.B. (West Virginia U.) '38; S.B. (*ibid.*) '39.
Mirman, Ben H., *a, w, sp,* Wausau, Wis. A.B. (U. of Wisconsin) '38.
Morgan, Ralph Siler, *a, w, sp,* Arden, N.C. S.B. (U. of North Carolina) '38.
Notier, Victor Anthony, *a, w, sp,* Holland, Mich. A.B. (Hope C.) '37.
Olson, Earl John, *a, w, sp,* Watford City, N.D. A.B. (State Teachers College) '33; S.B. (U. of North Dakota) '39.
Olson, Morten Sandel, *a, w, sp,* Northwood, N.D. A.B. (Concordia C.) '31; S.B. (U. of North Dakota) '39.
Orr, Kenneth Dew, *w, sp,* Moscow, Idaho. S.B. (U. of Idaho) '35; S.M. '36.
Pace, John William, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '38.
Palitz, Laurence Louis, *s, w,* New York, N.Y. Ph.D. '38.
Pelton, Eugene Charles, *a, w, sp,* Cheyenne, Wyo. S.B. (U. of South Dakota) '39.
Phillips, James Gartrelle, *a, w, sp,* Lawrence, Kan. A.B. (U. of Oklahoma) '30; M.S. (*ibid.*) '33.
Pickering, Paul Pierce, *a, w, sp,* Water Valley, Miss. D.D.S. (U. of Tennessee)) '34; S.B. '38; S.M. '39.
Reichert, Donald James, *a, w, sp,* Dickinson, N.D. S.B. (U. of North Dakota) '39; A.B. (*ibid.*) '38.
Rence, William George, *a, w, sp,* Maywood. S.B. '39.
Reynolds, Frances Elizabeth, *a, w, sp,* Fayetteville, Ark. A.B. (U. of Arkansas) '29.
Rogers, John Stafford, *a, w, sp,* Keyser, W.Va. A.B. (West Virginia U.) '38; S.B. (*ibid.*) '39.
Rubnitz, Willard, *a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '37.
Sandars, Leibert Jovanovich, *a, w, sp,* Chicago.

Sandburg, Carl Ludwig, *a, w, sp,* Chicago. S.B. (Northwestern U.) '36.
Sherman, John James, *a, w, sp,* Ironton, Ohio. A.B. (Marshall C.) '36; S.B. (West Virginia U.) '39.
Shlimovitz, Nathan, *a, w, sp,* Sparta, Wis. A.B. (U. of Wisconsin) '37.
Smith, Sidney, *a, sp,* Sheridan, S.B. '33.
Snead, William Howard, Jr., *a, w, sp,* Independence, Mo. S.B. (U. of Missouri) '39.
Stenerodden, Sidney Clinton, *a, w, sp,* Grand Forks, N.D. A.B. (U. of North Dakota) '38; S.B. (*ibid.*) '39.
Stenn, Harriett Stricker, *a,* Chicago. S.B. '38.
Stillerman, Manuel Leon, *a, w, sp,* Chicago. S.B. '38.
Stoddard, Eben, *a, w, sp,* Marblehead, Mass. A.B. (Dartmouth C.) '38.
Stratte, Paul Barnett, *a, w, sp,* Grand Forks, N.D. A.B. (U. of North Dakota) '38; S.B. (*ibid.*) '39.
Talbot, Blake Strother, *a, w, sp,* Waynesville, Mo. S.B. (U. of Missouri) '39.
Taub, Norman, *a, w, sp,* Chicago. S.B. '37.
Taylor, George Whitaker, *a, w, sp,* Green River, Wyo. U. of Utah.
Todd, William Henry, *a, w, sp,* Delaware, Ohio.
Vogele, Cleo Leo, *a, w, sp,* Lowry, S.D. A.B. (U. of South Dakota) '37.
Waldman, Jerome, *a, w, sp,* Chicago. S.B. '37.
Ward, William Paul, *a, w, sp,* Lincoln, Neb. S.B. (U. of Nebraska) '37.
Weinstein, Raymond Edgar, *a, w, sp,* Chicago. S.B. '37.
Whitaker, Eugene Giraud, *a, w, sp,* Chicago. Western Reserve U.
Whitmore, John David, *a, w, sp,* Roosevelt, Utah. S.B. (U. of Utah) '39.
Wichman, John Wilfred, *a, w, sp,* Tenino, Wash. U. of Washington.
Wilcox, John Guinan, *a, w, sp,* Quincy, S.B. '38.
Williams, William David, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '38.
Witt, Everett John, *a, w, sp,* Madison, Wis. Ph.B. (U. of Wisconsin) '37.
Woody, Howard Glenn, *a, w, sp,* Park Ridge. S.B. (U. of Idaho) '37.
Wright, Vinton Hodge, *a, w, sp,* Chicago.
Yudell, Milton Harry, *a, w, sp,* Bronx, N.Y. A.B. (U. of North Carolina) '37.
Zellner, Robert Earl, *a,* Lakeland, Fla. S.B. (U. of Florida) '36.

B. SENIORS

Akre, Osmund Harald, *a, w, sp,* Clarkfield, Minn. A.B. (Concordia C.) '36.
Anderson, William Henley, Jr., *a, w, sp,* Winter Haven, Fla. S.B. (U. of Florida) '36.
Argyle, Emery McKean, *a, w, sp,* Woods Cross, Utah. S.B. (U. of Utah) '37.
Austin, John Oliver, *a, w, sp,* McPherson, Kan. McPherson C.
Bailey, John Herbert, *a, w, sp,* Chicago. S.B. (Harvard C.) '33.
Barrow, Leonard Albert, *s, a, w,* Machias, Wash. S.B. (U. of Washington) '33.
Baxley, Raiford Douglas, *a, w, sp,* Wagram, N.C. S.B. (U. of North Carolina) '38.
Beatty, Jackson Delos, *s, a,* Morris. S.B. '35.
Beebe, Milton Omar, Jr., *a, w, sp,* Ft. Leavenworth, Kan. A.B. (Simpson C.) '35.
Behrents, Ellis Gordon, *a, w, sp,* Three Rivers, Mich. A.B. (St. Olaf C.) '36.
Bestoso, Robert Lawrence, *a, w, sp,* Jamestown, R.I. A.B. (U. of Alabama) '35.
Black, Albert Seward, Jr., *s, a, w,* Tacoma, Wash. S.B. (U. of Washington) '37.
Bowen, Jesse William, Jr., *a, w, sp,* Dickinson, N.D. A.B. (North Dakota U.) '37; S.B. (*ibid.*) '38.

Brannon, William Tappan, *a, w, sp,* Montgomery, Ala. A.B. (U. of Alabama) '36; M.S. (*ibid.*) '37.
Braude, Abraham I., *a, w, sp,* Chicago. S.B. '37.
Carlson, Helen Blake, *s, a, w,* Chicago. S.B. '35, Ph.D. '39.
Chang, Clarence Fong, *a, w, sp,* Honolulu, T.H. A.B. (U. of Hawaii) '36.
Chinn, Ben D., *s, a, w,* Chicago. Ph.D. '35.
Chrisos, Sam Spiro, *s, a, w,* Chicago. S.B. '37.
Clausen, Fred W., *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '34; A.M. (*ibid.*) '36.
Coggeshall, Allan Bancroft, *a, w, sp,* Pleasantville, N.Y. A.B. (Dartmouth C.) '37.
Collins, Thomas Rodney, *a, w, sp,* Emporia, Kan. S.B. (Kansas State C.) '36.
Congdon, Gordon Hall, *a, w, sp,* Wenatchee, Wash. S.B. (U. of Washington) '36.
Dahlin, David Carl, *a, w, sp,* Centerville, S.D. S.B. (U. of South Dakota) '38.
Davidson, Orin Leonard, Jr., *a, w, sp,* Springfield, Mo. A.B. (Drury C.) '37.
dePeyster, Frederic Augustus, *a, w,* Winnetka. A.B. (Williams C.) '36.
Dillon, Jackson Culley, *a, w, sp,* Clovis, N.M. S.B. '38.
Dorsey, William Arch, *s, a, w,* Wheeling, W.Va. A.B. (Western Reserve U.) '36.
Dyer, Allen Miller, Jr., *s, a, w,* Philippi, W.Va. A.B. (West Virginia U.) '36; S.B. (*ibid.*) '38.
Farley, Frank Jefferson, *s, a, w,* Chicago. S.B. (U. of Washington) '36.
Farley, Harriet Gillette, *s, a, sp,* Chicago. S.B. '37.
Farley, Otis Rhanor, *s, a, w,* Chicago. A.B. (U. of California at Los Angeles) '33.
Farmer, Joseph Arthur, *a, w, sp,* Shelby, N.C. A.B. (U. of North Carolina) '35.
Farthing, Gene William, *s, a, w,* Ozark, Mo. A.B. (U. of Missouri) '36; S.B. (*ibid.*) '38
Ferrara, Virginia, *s, a, w,* Morgantown, W.Va. A.B. (West Virginia U.) '37; S.B. (*ibid.*) '38.
Fried, Julius Lionel, *a, w, sp,* Chicago. S.B. '37.
Gibbs, Richard Worthen, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '36.
Goodhope, Carroll Dauphin, *a, w, sp,* Viborg, S.D. A.B. (U. of South Dakota) '36; S.B. (*ibid.*) '38.
Gottschalk, G. Howard, *s, w, sp,* Chicago. S.B. '37.
Halbert, John Jerrard, *a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '37.
Hill, Frank Albert, *s, a, w,* Plymouth, Wis. S.B. (U. of Wisconsin) '38.
Hoesley, John Bernard, *a, w, sp,* Crystal, N.D. A.B. (U. of North Dakota) '37; S.B. (*ibid.*) '38.
Hopper, Jerome Murray, *a, w, sp,* Chicago. S.B. '38.
Hyland, John Edward Patrick, *a,* Fargo, N.D. S.B. (U. of North Dakota) '35.
Jacobs, Thomas Price, *a, w, sp,* New Rochelle, N.Y. A.B. (Dartmouth C.) '37.
Jacobus, Ryland Marcus, *a, w, sp,* Letcher, S.D. A.B. (Yankton C.) '35; S.B. (U. of South Dakota) '38.
Johnson, Chester T., *a, w, sp,* DeForest, Wis. S.B. (U. of Wisconsin) '38.
Johnson, George Edwin, *a, w, sp,* Uriah, Ala. A.B. (U. of Alabama) '35.
Kaess, Karl Vincent, *a, w, sp,* Fargo, N.D. S.B. (U. of North Dakota) '38.
Kaplan, Henry Seymour, *a, w, sp,* Chicago. S.B. '38.
Karberg, Richard John, *s, a, w, sp,* Madison, Wis. A.B. (U. of Wisconsin) '37.
Koven, Arthur Jerome, *a, w, sp,* Maywood, S.B. '37.
Krausz, Erwin Otto, *s,* Chicago. Ph.D. (U. of Czernowitz, Austria) '10.
Kruzich, Stephen John, *a, w, sp,* New England, N.D. S.B. (U. of North Dakota) '38.

Laden, Edward Lawrence, *a, w, sp,* Chicago. S.B. '37.
Lieppman, Jack Emanuel, *a, w, sp,* St. Joseph, Mo. A.B. (U. of Missouri) '36; S.B. (*ibid.*) '37.
Marcus, Bernard, *a, w, sp,* Mt. Vernon, N.Y. A.B. (Cornell U.) '36.
Marks, Louis M., *s, a, w,* Chicago. S.B. '37.
Marshall, John Stuart, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '37.
Massover, Alfred Jacob, *a, w, sp,* Chicago. S.B. '38.
Major, Wilfred E., *s,* Chicago. S.B. (Carroll C.) '35.
May, James Sydney, Jr., *a, w, sp,* Chicago. S.B. '37.
McGregor, Eugene Bowles, *a. w, sp,* Lisbon, N.H. A.B. (Dartmouth C.) '37.
Milberg, Max Benjamin, *a, w, sp,* Brooklyn, N.Y. A.B. (U. of Wisconsin) '35.
Miller, H. Lloyd, *s, a, w,* Chicago.
Morgan, Sherman McKinnon, *a, w, sp,* Murray, Utah. A.B. (U. of Utah) '37.
Moussa-George, Della, *s, a, w,* Jerusalem, Palestine. R. N. (Presbyterian Hospital) '32; S.B. '34.
Nelson, Donald Emmitt, *s, a, w,* Madison, Wis. S.B. (U. of Wisconsin) '37.
Nielsen, Adolph Martin, *s, a, w,* Salt Lake City, Utah. A.B. (U. of Utah) '37.
O'Brien, Donald Erwin, *a, w, sp,* Ironwood, Mich. A.B. (Dartmouth C.) '37.
Olentine, Julie Etta, *s, a, w,* Oak Park. S.B. (Northeastern State Teachers C.) '36.
Orme, James Forrest, *a, w, sp,* Tooele, Utah. S.B. (U. of Utah) '37.
Palitz, Laurence Louis, *w, sp,* New York, N.Y. Ph.D. '38.
Passamonte, Jane Ann, *a, w, sp,* Madison, Wis. Ph.G. (U. of Buffalo) '26; S.B. (U. of Wisconsin) '38.
Paulus, James Walter, *a, w, sp,* Madison, Wis. A.B. (Columbia C.) '36.
Peimer, Ralph, *a, w, sp,* Paterson, N.J. A.B. (U. of Alabama) '36.
Pilger, Irvin S., *s, a, w,* Ogden, Utah. A.B. (U. of Utah) '36.
Potter, Wilbur Furse, *s,* Oxford, Miss.
Reese, Owen Glendor, *a, w, sp,* Salt Lake City, Utah. A.B. (U. of Utah) '37.
Riley, Edwin Glover, *a, w, sp,* Atlantic City, N.J. S.B. (Rutgers U.) '35.
Ryan, John Bernard, *s, a, w,* Sioux City, Iowa. S.B. (U. of South Dakota) '37.
Sattler, Chester Arthur, *s, a, w,* Avon, S.D. S.B. (U. of South Dakota) '38; A.B. (Yankton C.) '36.
Saxvik, Russell Oliver, *a, w, sp,* Bismarck, N.D. A.B. (Luther C.) '36.
Schilleci, Vincent Joseph, *s, a, w,* Bessemer, Ala. A.B. (U. of Alabama) '37.
Schuknecht, Harold Fredrich, *a, w, sp,* Chancellor, S.D. S.B. (U. of South Dakota) '38.
Schutz, Weston John, *a, w, sp,* Shawano, Wis. A.B. (U. of Wisconsin) '38.
Sicher, William David, *a, w, sp,* New York, N.Y. S.B. '38.
Sidell, Richard Huntington, *a, w, sp,* Joliet. S.B. '37.
Siglin, Irvin S. *a, w, sp,* Chicago. S.B. '38.
Skubi, Kazimer B., *s, a, w,* Seattle, Wash. S.B. (U. of Washington) '32.
Smith, Arthur Lawrence, Jr., *a, w, sp,* Lincoln, Neb. S.B. '38.
Smith, George Washington, Jr., *a, w, sp,* Shelton, Neb. A.B. (U. of Nebraska) '36.
Smith, Samuel Wayne, *s, a, w,* Smithfield, Utah. S.B. (Utah State Agricultural C.) '36.
Starekow, Milton David, *a, w, sp,* Minneapolis, Minn. A.B. (U. of North Dakota) '36.
Steele, Burns Charles, *a, w, sp,* Duluth, Minn. S.B. '38.
Stemple, Margaret Ida, *a, w, sp,* Morgantown, W.Va. A.B. (West Virginia U.) '37; S.B. (*ibid.*) '38.
Stewart, James Bell, *a, w, sp,* Ligonier, Ind. A.B. (U. of Nebraska) '36.

Stotler, John Francis, *a*, *w*, *sp*, Youngstown, Ohio. S.B. '38.
Tanoue, Roy Toshiro, *a*, *w*, *sp*, Honolulu, T.H. A.B. (U. of Hawaii) '36.
Thomas, Howard B., *a*, *w*, *sp*, Lorenzo, Idaho. S.B. (Utah State Agricultural C.) '32.
Thompson, Arnold Meredith, *a*, *w*, *sp*, Mitchell, S.D. A.B. (Augustana C.) '36; S.B. (U. of South Dakota) '38.
Tipshus, Alfons Fabian, *s*, *a*, *w*, Oak Park, S.B. '37.
Tuch, Benjamin Ernest, *a*, *w*, *sp*, Los Angeles, Calif. A.B. (U. of Southern California) '36.
Vanderhoof, Richard Culver, *s*, *a*, *w*, Colorado Springs, Colo. A.B. (Colorado C.) '31.
Vander Velde, Kenneth Martin, *a*, *w*, *sp*, Holland, Mich. A.B. (Hope C.) '36.
Walpole, Ben, *a*, *w*, *sp*, Park Ridge. S.B. '36.
Was, Harold Howorth, *s*, *a*, Chicago.
Watson, John Allen, *a*, *w*, *sp*, Bremerton, Wash. S.B. (U. of Washington) '36.
Weiseth, Warren Meredith, *a*, *w*, *sp*, Colman, S.D. A.B. (Augustana C.) '36; S.B. (U. of South Dakota) '38.
Wong, Wayne, *s*, *a*, *w*, Wailuku, T.H. A.B. (U. of Hawaii) '36.
Zellner, Robert Earl, *sp*, Lakeland, Fla. S.B. (U. of Florida) '36.

C. UNCLASSIFIED

McKee, Charles, M., *sp*, Austin, Ky.

SUMMARY OF ATTENDANCE IN THE MEDICAL SCHOOLS FOR THE YEAR 1939–40

	Men	Women	Total
On the Quadrangles			
Students in preclinical courses, less duplicates	169	9	178
Students in clinical courses	86	9	95
Special preclinical medical students	38	6	44
Total	293	24	317
At Rush Medical College			
Third year, less duplicates	97	5	102
Fourth year, less duplicates	103	7	110
Unclassified students	1	0	1
Total	201	12	213
Grand total	494	36	530

OFFICIAL DOCUMENTS

The following *Announcements* of the University of Chicago are available for distribution and will be sent upon application made to the Entrance Counselor, The University of Chicago, Cobb Lecture Hall, Room 105:

The College and the Divisions
The School of Business
The Department of Education
The Divinity School
The Graduate Library School
The Law School
The Medical Schools
The School of Social Service Administration
The Summer Quarter
Home-Study Department
Awards and Aids
University College
Mathematical Statistics
The Preparation of Teachers
Nursing Education
Study in Child Development
Department of Home Economics and Household Administration

APPLICATION FOR ROOM IN RESIDENCE HALL

The Bursar
The University of Chicago

Please check either A or B, and C:

A. ☐ I wish to apply for a room in.....Hall at a rental not to exceed $.....for the.....Quarter, 19....., and inclose herewith the required deposit.

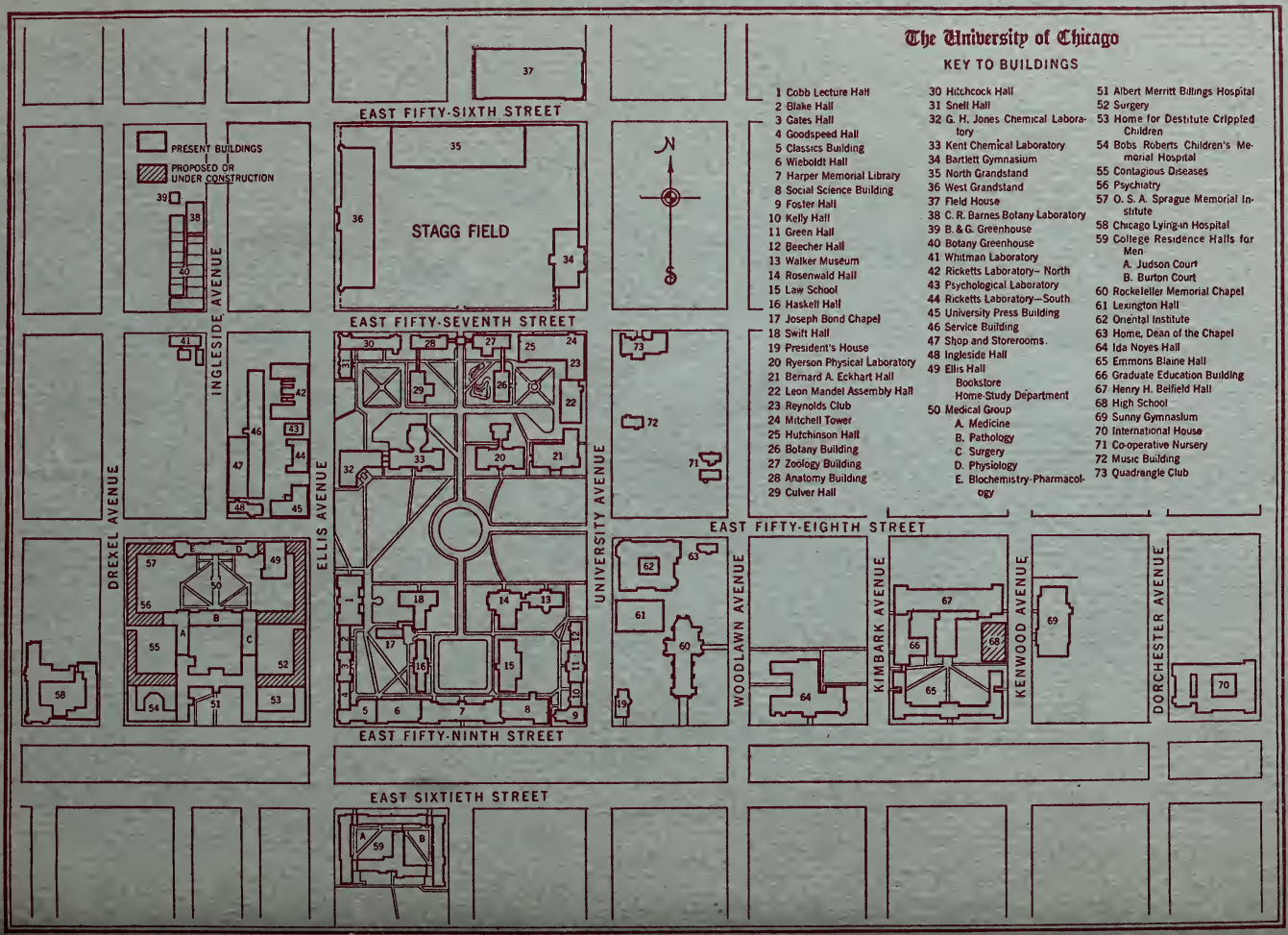
B. ☐ Before making application for a room I wish detailed information about the halls for the.....Quarter, 19.....

C. ☐ I expect to register in (the College, Division of....., or Professional School.....), and request that a catalogue be sent to me.

Name (Mr., Mrs., Miss).....

Address.....

Date.....



The University of Chicago

KEY TO BUILDINGS

1 Cobb Lecture Hall
2 Blake Hall
3 Gates Hall
4 Goodspeed Hall
5 Classics Building
6 Wieboldt Hall
7 Harper Memorial Library
8 Social Science Building
9 Foster Hall
10 Kelly Hall
11 Green Hall
12 Beecher Hall
13 Walker Museum
14 Rosenwald Hall
15 Law School
16 Haskell Hall
17 Joseph Bond Chapel
18 Swift Hall
19 President's House
20 Ryerson Physical Laboratory
21 Bernard A. Eckhart Hall
22 Leon Mandel Assembly Hall
23 Reynolds Club
24 Mitchell Tower
25 Hutchinson Hall
26 Botany Building
27 Zoölogy Building
28 Anatomy Building
29 Culver Hall
30 Hitchcock Hall
31 Snell Hall
32 G. H. Jones Chemical Laboratory
33 Kent Chemical Laboratory
34 Bartlett Gymnasium
35 North Grandstand
36 West Grandstand
37 Field House
38 C. R. Barnes Botany Laboratory
39 B. & G. Greenhouse
40 Botany Greenhouse
41 Whitman Laboratory
42 Ricketts Laboratory– North
43 Psychological Laboratory
44 Ricketts Laboratory—South
45 University Press Building
46 Service Building
47 Shop and Storerooms.
48 Ingleside Hall
49 Ellis Hall
Bookstore
Home-Study Department
50 Medical Group
A. Medicine
B. Pathology
C. Surgery
D. Physiology
E. Biochemistry-Pharmacology
51 Albert Merritt Billings Hospital
52 Surgery
53 Home for Destitute Crippled Children
54 Bobs Roberts Children's Memorial Hospital
55 Contagious Diseases
56 Psychiatry
57 O. S. A. Sprague Memorial Institute
58 Chicago Lying-in Hospital
59 College Residence Halls for Men
A. Judson Court
B. Burton Court
60 Rockefeller Memorial Chapel
61 Lexington Hall
62 Oriental Institute
63 Home, Dean of the Chapel
64 Ida Noyes Hall
65 Emmons Blaine Hall
66 Graduate Education Building
67 Henry H. Belfield Hall
68 High School
69 Sunny Gymnasium
70 International House
71 Co-operative Nursery
72 Music Building
73 Quadrangle Club